Unesco sponsored the Inter-American Seminar on Literacy and Adult Education at Quintandinha, Brazil, which opened on July 27.

On this occasion Unesco published a special edition of the "Courier" in Portuguese at Rio de Janiero. The Seminar opened too late to be reported in the present edition of the "Courier". Full details of its activities will be given in our September issue.

The fact that ploughs and hammers are necessary does not mean that books or newspapers are not.

—Dr. Jaime Torres Bodet to the Quitandinha Seminar, July 1949.

UNESCO

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THE LAST PRINCE OF POETS: GOETHE

THE Courier *is happy to associate itself with the world celebration of the bicentenary of Goethe, who was born at Frankfort-on-Main on August 28, 1749.*

As its special tribute to the great German and European poet and thinker, Unesco has asked men of letters of several countries to contribute chapters, written for the occasion, to a volume entitled "Unesco's Homage to Goethe on the Second Centenary of his Birth", which will be published on his birthday.

Limitations of space prevent the Courier *from quoting from all of these contributions, but extracts from some of them are given in this issue. The memorial volume will be published simultaneously in English, French and Spanish editions, each containing numerous illustrations.*

We also print on this page part of the letter in which Dr. Jaime Torres Bodet, Director-General of Unesco, asked for contributions to the memorial volume, and an extract from the translation of the first part of Goethe's Faust *by the poet Shelley, which though only a fragment is perhaps the finest rendering into English of any of Goethe's work.*

The portrait medallion of Goethe reproduced on this page was executed by the French sculptor, David d'Angers, at Weimar in 1829. On page 11 is a curious reproduction of a water-colour sketch made by Goethe at the French frontier after the Battle of Valmy, in 1792.

A REMINDER

"The General Conference instructs the Director-General to negotiate with Member States and National Commissions in order to develop plans for wider circulation of the "Courier"; such plans should include proposals for facilitating the reproduction of the "Courier" by Member States or National Commissions, either in the present working languages or in translations provided by them."

Resolution adopted by the General Conference of Unesco at Beirut, November 1948.

THERE is a very complete fusion in Goethe's own mind of his life as living experience and his poetry as an expression of that experience. This idea is conveyed in the title he gave to his autobiography, *Dichtung und Wahrheit*. It is admirably summed up by Eckermann in words which may seem today to confuse the role of public man with that of poet striving towards a kind of public objectivity.

"WHOEVER's task it may be to have charge of many activities, to judge, to lead, he must also endeavour to gain as many insights as possible into these many tasks. Thus a prince and a rising statesman can never make himself sufficiently many-sided: many-sidedness appertains to his craft.

"Likewise the poet must strive for a multifold awareness. For the whole world is his material, which he must hold under his hand and learn to create in speech."

We must squarely confront ourselves with the fact that Goethe was a poet of the world. This is the fact above all that puts him among those princes of poets, Dante and Shakespeare and Racine, who used for their poetry the material of the whole world of their time, and which distinguishes him from the poets who followed him.

BY STEPHEN SPENDER

A very wide experience of what it meant to rule, to be at the apex of the learning of a cultivated aristocratic class in Europe, was the daily experience which flowed through Goethe's mind and body; and it was out of this that he made his poetry.

Now it is scarcely too much to say that in his own time, and ever since, people have hated Goethe for being in this position. The revolutionaries hate him because they consider him counter-revolutionary; the democrats because they consider him a snob; the devout because they consider him worldly; the romantic because they consider him bourgeois; the sick because they consider him well; the partial because they consider him impartial; the aesthetically minded "art-for-art's-sakers", because they consider him a philistine.

It is doubtless the fault of society that no poet since Goethe has been at the centre of the experience of his time in the way that he was. But the impossibility of being like him should not detract from our appreciation of his position. Looked at in this way, Goethe was the last of the poets into whose minds their whole time flowed: its power, its knowledge, its faith. The tormenting struggle and anguish by which an age orders men's lives and prepares the mind of a whole generation of men to create and build and believe and then pass on into death, seemed to stir in the works of these poets like motes of dust in a beam of light.

Since then we have had greater poetry than Goethe. But it has expressed other, more peripheral attitudes: rebelliousness, sickness, renunciation, resignation, disgust, quietism, nightmare, mystical belief.

Goethe's acceptance of the social forms of his time went beyond his being a nationalist or even a defender of the aristocracy. He did not like the French revolution—but he cared for the attempts to restore the monarchy still less. He did not like the invasion of Germany by Napoleon, but nevertheless he wrote no nationalist diatribes against it, and he accepted the invitation to the famous meeting with Napoleon.

(Copyright by Unesco and Stephen Spender.)

Unesco Salutes Goethe's Memory

THE world is celebrating this year the bicentenary of Goethe's birth. In such a celebration, Unesco sees cogent reasons for persevering in the work of promoting understanding between cultures which has been entrusted to it. It is proud to salute Goethe's memory and to recognize in it an imperishable testimony to what the human mind can accomplish when its desire for knowledge, that is for analysis and awareness, is combined with the power of understanding, that is to say, of harmonizing and reconciling. That, exactly, is the spirit which animates Unesco

Unesco wishes to demonstrate its profound respect for a creative writer whose thirst for knowledge remained unquenched until his death, and whose whole existence was an heroic effort to achieve that inner balance, at the same time noble and constructive, which men and nations attain only by vigilant insistence upon clear thinking and by seeking a culture that shall free them from their prejudices. Accordingly, Unesco has decided to publish a volume in which a number of distinguished thinkers, artists and writers will pay homage to the author of *Faust* and *Wilhelm Meister*.

Goethe was a great European. He was also a great universalist. He sought out extremes, not in order to delight in their opposition but to measure the distance between them and, as often as he could, to endeavour to span it with his genius. He cared passionately for every form of culture and his curiosity extended to every kind of scientific investigation. His human apprenticeship lasted until he was eighty. He never ceased to feel strongly that the essence of science and culture consists in the fact that they are benefits which exist only in so far as they are transmitted. Hence his determination to be an educator and hence his marvellous fitness for the role.

THE SUPPLEMENT

The Supplement in this month's *Courier* deals with the Popularization of Science and was prepared by the Natural Sciences Department of Unesco. **See page 5.**

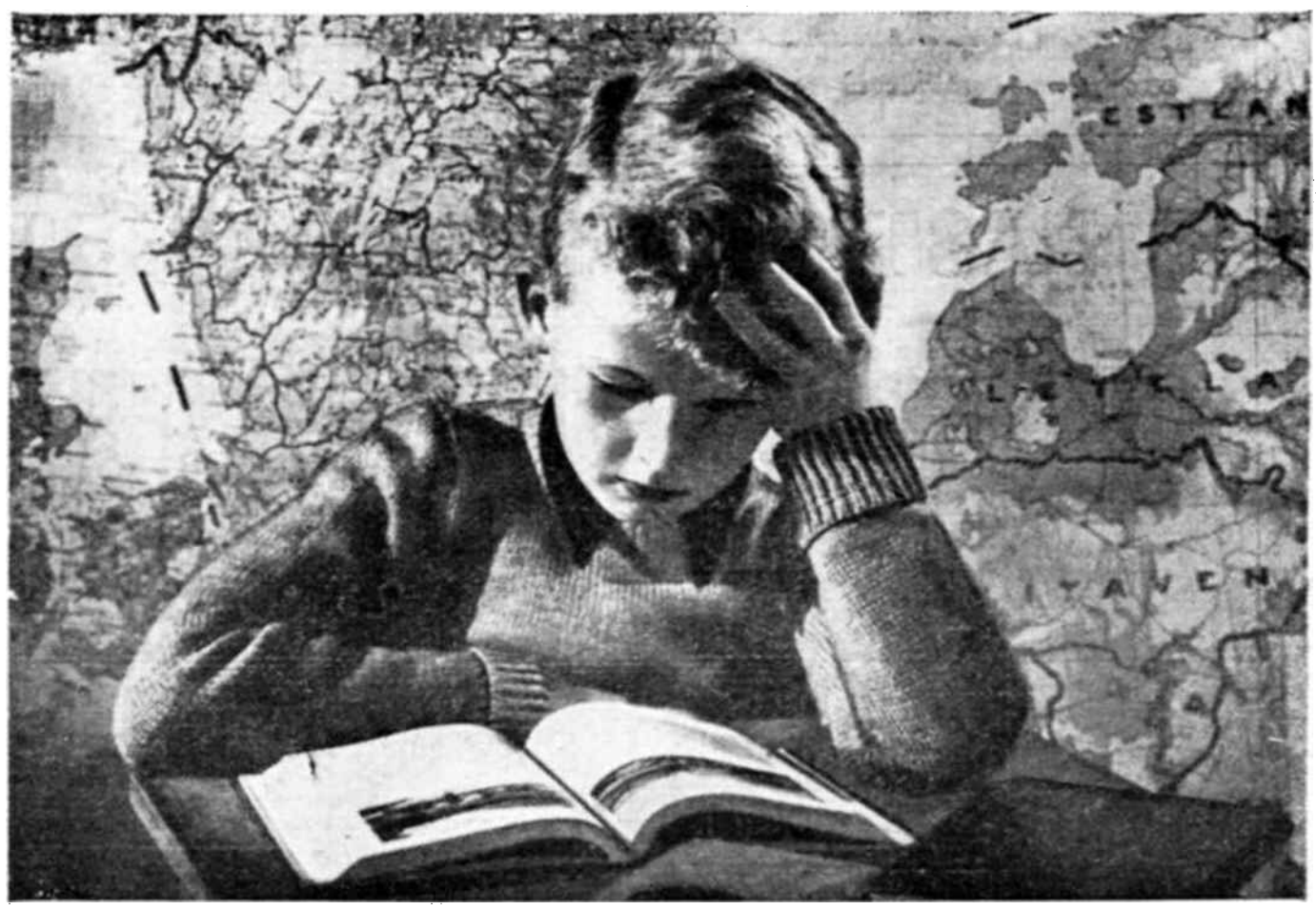
An Italian "City of Hope" for young war victims is described on page 9.

PUBLIC EDUCATION CONFERENCE MEETS AT GENEVA

The twelfth International Conference on Public Education, meeting at Geneva from July 4 to July 12, considered reports by the Ministries of Education on developments in Public Education during the school year 1948 to 1949 and gave special attention to the introduction to Natural Science in the Primary School, the teaching of reading and the teaching of geography as a means of encouraging international understanding.

Prof. de Berredo Carneiro, permanent delegate of Brazil to Unesco, presided.

In an address to the Conference, Dr. Jaime Torres Bodet, Director-General of Unesco, said in part:



"You need the teaching of Geography. . ."

THE 19th century can boast of having abolished slavery by law, and the 20th century should devote its efforts to the abolition of another form of slavery—illiteracy. We are all aware of the need for removing that fundamental ignorance, but our task is not so much to formulate our moral duty as to study the various campaigns which have already been carried on in various parts of the world, and so to develop definite, practical and efficient methods which will, so to speak, be the tactics to be adopted in our struggle.

You want the teaching of geography —which should demonstrate the unity of the world in its marvellous diversity— to be a more effective means of developing international understanding. We have been told of some very interesting experiments. Hitherto, you had drawn mainly on history for instances of the community of interests among men. You were right. We must still emphasize that point. We should sadly deceive ourselves if we thought that present achievements in this field were enough to quieten all anxiety. We shall not cease our efforts to improve the teaching given and to secure the revision of history textbooks, which, for more or less nationalistic reasons, often endanger, if not truth, at least the spirit of international co-operation. While we shall not forget these still unfinished tasks, we shall, at this Twelfth Conference, pay special attention to the teaching of geography. Cannot we find in geography lessons, from the study of climate to the distribution of natural wealth, excellent opportunities to awaken and develop in pupils an appreciation of the interdependence of humanity?

I am glad to be able to tell you that Unesco, well aware of their importance, is helping to arrange several international seminars. One of these, dealing with the problem of illiteracy on the continent of America, has been organized jointly by the Brazilian Government, the Organization of American States and Unesco; it will be held at Niteroi (Brazil) from 27 July to 2 September. Another seminar will be held this year, with the assistance of the Indian Government, near Mysore, between 2 November and 14 December; this one will deal with adult education in rural communities in Asia.

Preparations are already in hand for two seminars to be held next year: one, on the improvement of school textbooks and in particular of history textbooks, will be a sequel to a series of surveys and recommendations begun some time ago; the other will deal with the teaching of geography as a means of developing international understanding.

Natural Science

Another item on our agenda, the teaching of natural science in primary schools, has been included because of the growing curiosity of teachers and pupils and the requirements of the modern world. We have to discover potential scientists, and the development of technical processes in both agriculture and industry makes it necessary for the workers of the future to be trained to understand and overcome the difficulties of their trade. We must be sure to instil not only knowledge but respect for natural resources, the waste of which paradoxically makes the very increase of population a menace. Such teaching will illustrate the old maxim that "we can command nature only when we obey her".

In the space of less than thirty years, the world has been torn by two great wars which, in the number of deaths and the precision of the means of destruction used, have surpassed all men's efforts in past centuries to slay and debase one another. Everything which man had come to look upon as the triumph of civilization—the most marvellous discoveries in engineering and chemistry, the utmost refinements of dialectic and eloquence—all these things became suspect to him when they combined to foster hatred, evil and negation instead of glorifying life.

We had been taught to revere intelligence, and intelligence sometimes proved a dread enemy. Whe had learned to respect science, and science was converted into a weapon of aggression. What did this tragic spectacle signify? The failure of spiritual values, a sharp reversal of all that progress had achieved? No, most certainly not. Philosophy, science and art can none of them be held guilty of the abuses to which they were put by those responsible for the vast holocaust in which the whole civilization of our time so nearly perished.

Liberation not Complete

IT is not of intelligence that we must beware but of its secret adversary, intelligence without a moral sense. In 1933 a European thinker, questioned about the future of civilization, replied: "The process of liberation (begun in the 16th century) reached completion with the French Revolution and the establishment of the democratic political regime. Humanity had for centuries something to do: to break free from its mediaeval bonds. We have now reached the end of this stage of development, and civilization does not quite know what to do. It needs some great task to carry out".

We have a supreme duty—to help, as teachers, to organize a society in which every man will be able to shake hands, in brotherly trust and friendship, with his kinsman from Europe or Asia, with the black man from Africa and the red man from America. All races, all peoples, all national aspirations must have scope for expression in this post-war world. If a single voice were to be silent, if a single right were to be trodden under foot, humanity would have shed its blood in vain in those great battles. The period of crisis through which we are passing will never find a solution in an arbitrary distinction between victors and vanquished. A peace founded solely upon an improvised balance of power could be, at best, only an uncertain truce.

Life is a Problem

WHAT we need then, in education, are teachers who are men first and foremost, and not mere storehouses of educational formulae. We believe that educating man does not mean merely imparting the essentials of tradition and culture. It means instilling an effective confidence in his original and creative power; it means providing him, from early childhood, with teaching in which he may recognize life for what it is : a problem, a constant process of discovery, a perpetual seeking of private and communal responsibilities. Then, overwhelmed as it were, by the mounting wealth of knowledge in the world, he will convert it into a personal capacity for renewal, which will endure as long as life itself.

Human personality does not find fulfilment in the triumph of individualism. Freedom is only an instrument for a richer development of man, for which he must be a member of a community; and that membership itself is worthy of man only if it is freely chosen. The second paragraph of Article 25 of the Universal Declaration of Human Rights expresses that synthesis of the individual and the community which the true right to education helps to promote: "Education shall be directed to the full development of human personality and to the strengthening of respect for human rights and fundamental freedoms. It shall promote understanding, tolerance and friendship among all nations, racial or religious groups, and shall further the activities of the United Nations for the maintenance of peace". This brings to my mind the noble motto which I once saw inscribed on the pediment of the Town Hall of Lugano: *libertas in legibus*, liberty in law.

The Soul of the People

SUCH liberty within a community can only be fully exercised, as Article 27 goes on to say, by participation in the cultural, artistic and scientific life of the group: "Everyone has the right freely to participate in the cultural life of the community, to enjoy the arts and to share in scientific advancement and its benefits". There must be no esoteric culture, the monopoly of a favoured few The strength and the very survival of a culture depend upon its being rooted in the soul of the people.

Unesco is so well aware that freedom should increase concurrently with the sense of civic obligations, and that the simultaneous development of both should be the aim of education, that the Organization's Code of Directives, which has been drawn up to guide the preparation of its practical programme, and which was approved last month by the Executive Board, stipulates that: "In Education, Unesco will act as a centre for the exchange and dissemination of ideas and practices, in order to encourage the growth of effective systems of education, seeking especially to bring people to understand one another, to train good citizens and to give every person, rich or poor, in town or country, without distinction of colour, race, sex, or creed, the opportunity for an education which best assures him the possibility to develop his personality and carry out his social responsibilities".

Without doubt the two most difficult things for humanity to learn are the art of ruling men and the art of educat- instead of feeling himself outstripped, ing them. For my part, I am inclined to believe that if we had mastered the second, the difficulties of the first would be appreciably reduced. We must not forget that when we are training men we are building the city of the future. We who are educationists, and those we have to guide, must all be the architects of that society in which, if we have well fulfilled our task, human rights and human liberties will flourish.

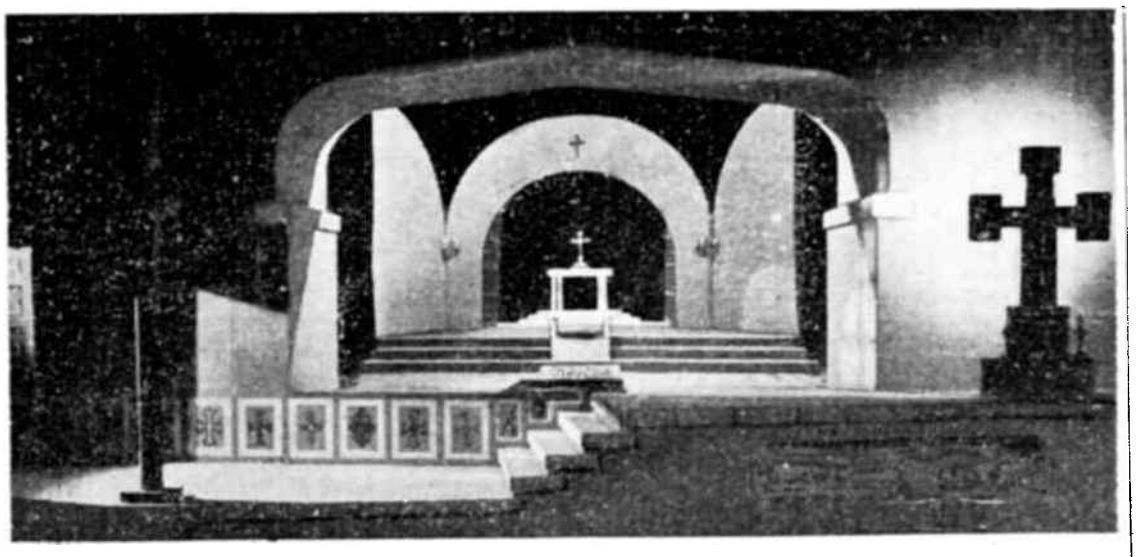
Prof. CARNEIRO

President of Education Conference

Professor Paulo de Berredo Carneiro, member of the Unesco Executive Board and Permanent Delegate of Brazil to Unesco, was elected President of the Public Education Conference for the current year at the opening of the 12th Annual Session on July 4. Professor Carneiro has represented the Government of Brazil at many international conferences, notably those of the I.L.O., the Institute of Intellectual Co-operation and the United Nations (first part of the General Assembly in London, 1946). He was Brazilian Delegate of I.B.E. in 1948 and has been appointed as delegate to the 1949 meeting.

Professor Carneiro has long been associated with the work of Unesco. He was a delegate to the Conference in London in 1945, where the Constitution of Unesco was drawn up; he was concerned with the work of the Preparatory Commission during 1946, and was a delegate to the First, Second and Third Sessions of the Unesco General Conference in Paris, Mexico and Beirut. At the Paris Conference he was elected for a three-year term to the Executive Board of Unesco.

On July 23, when visiting Athens, Prof. Carneiro handed to M. Tatsos, the Greek Minister of Education, a cheque for 10,850 dollars sent by Unesco "as a symbolic gift" to the Greek schools which had suffered most damage from the War. The presentation was made in the conference hall of the University of Athens in the presence of the University Senate, the Ministers of Education and of the Press, delegates from women's organizations and other official representatives.



A model set for "Murder in the Catheral", by T.S. Eliot.

I.T.I. CONGRESS MEETS

"The Theatre is a living force..."

THE theatre is a form of international co-operation which has existed for centuries. Plays by Shakespeare tour the rural regions of India; the French classics are staged in Rio de Janeiro; an American comedy is adapted for Czechoslovakian audiences... and these are only a few of the hundreds of examples of our times.

The theatre is a living force for international cultural exchange, which merely means giving the people of one country a chance to learn how others live and think. The world wants to see the theatrical works of all nations, but then the question arises: "How to help the movement of plays and actors from one part of the world to the other?"

This question was foremost in the minds of theatre people from all parts of the world who came to Zurich, Switzerland, last month, for the Second Congress of the International Theatre Institute (ITI) which has established 19 national centres, since it was set up in Prague, just over a year ago.

International Tours

The Congress was opened in Zurich's City Hall, the historic "Rathaus", by Mr. Llewellyn Rees, head of the British delegation, and held its business sessions in the Zurich Museum of Modern Art. After considering the problems raised by customs and entertainment taxes, transport costs and visa regulations, the Congress approved a number of "model" clauses concerning international tours of theatrical companies, intended for eventual incorporation in international cultural agreements.

These clauses cover the promotion of theatrical tours, exemption from entertainment taxes on non-commercial tours, the provision of simplified customs regulations and the granting of reduced transport rates on international tours.

In addition, the ITI delegates urged all countries to set up national theatre organizations on the lines of Great Britain's Arts Council and France's Action Artistique.

The development of national theatre organizations and the granting of the facilities covered by the model clauses will help to make the theatre a still greater force for international co-operation and will ensure a constant transfusion of ideas from one country to another.

International Theatre Week

HOW to "mobilize" the theatre in the campaign to spread understanding of the Universal Declaration of Human Rights was another major question discussed by the Congress.

M. Jaime Torres Bodet, Director-General of Unesco, recalled, in a message to the Congress, that the United States ITI Centre had already suggested holding an international theatre week devoted to the themes of human rights and world peace.

It would not indeed be hard to find among all the plays of the world, masterpieces on the eternal subject of the liberation of man and, to use Tolstoy's words, his victory over the 'powers of darkness', said M. Torres Bodet.

"From Sophocles to Goethe and Schiller, from Aristophanes to Molière, from Shakespeare to Ibsen—what great dramatic poet is there who has not immortalized humanity's struggle against despotism, intolerance, injustice, ignorance and fear? Such works have lost nothing of their virtue, and appeal to the imagination of the masses as powerfully as they ever did.

"But we can do more than this. We can appeal to the creative genius of the dramatists of today. Do not the Universal Declaration of Human Rights and the principles and deeds that it implies provide authors, producers and actors with an inexhaustible source of inspiration?

"There is no question, of course", M. Torres Bodet continued, "of imposing subjects or reviving the 'propaganda' play. But such an appeal launched by you would show that the contemporary theatre had a high and compelling conception of the part it could play in the life of nations and on behalf of international understanding."

Following M. Torres Bodet's appeal, the Congress adopted the idea of an International Theatre Week to be held during 1950. Theatres in every country will be asked to devote this week to the themes of world peace and the Universal Declaration of Human Rights.

U.N.U.T.O.

MANY contemporary dramatists have already embodied these two themes in their works. Last year, for example, J.B. Priestley, the English author and playwright, created an imaginary organization, "The United Nations Underdeveloped Territories Organization (UNUTO)" in his play "Home is Tomorrow". To-day, this play takes on a new and topical interest as the United Nations draws up a plan to assist the under-developed areas of the world.

One way in which the ITI tries to break down the national barriers of the theatre world is by making known the latest developments in theatre design, stage technique and production methods in all countries. Because of war damage, suffered by many theatres, information on construction is especially important today.

To enable the delegates to follow the trend of theatre architecture in various countries, leading architects reported to the Congress on developments in France, Poland, Sweden, Switzerland and the United States.

Theatre Architecture

Recognizing the importance of theatre reconstruction problems, the Congress decided to call an international conference on theatre architecture and stage techniques next year, in conjunction with the Third ITI Congress. Another plan for 1950 provides funds for eight theatre fellowships, to enable young theatre artists proposed by ITI National Centres to study or be trained abroad.

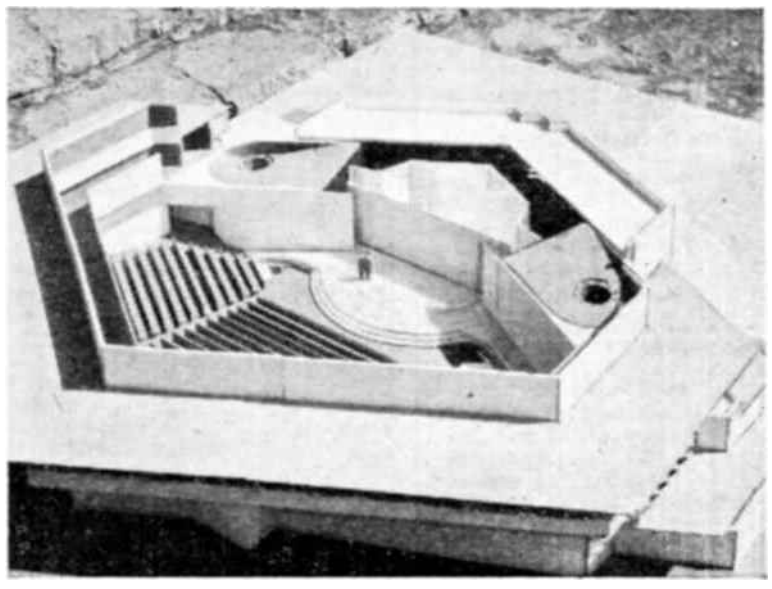
THE Congress also decided to reduce the scope of its present monthly publication, the ITI Bulletin, which has provided a forum for countries to make known their current theatrical productions and activities. In future its coverage will be restricted to the world premieres of plays, opera and ballet. General theatre activities will be dealt with in a new publication, a half-yearly World Review of the Theatre.

Amateur Theatres

In order to associate amateur theatre movements more closely with the work of the ITI, the Congress recommended that National Centres should have amateur theatre representation and that one representative should be included in each Congress delegation.

During the Congress, Mr. Maurice Kurtz, the author and playwright, who has been General Secretary of the ITI since its foundation, succeeded in this post by M. André Josset, the French playwright.

Although it is only just over a year old, the ITI has already made great progress towards the achievement of its broad objectives. Mr. J.B. Priestley, one of its founders, summed these up in the early days of the Institute when he said: "A well-written play may do more than fifty speeches by well meaning politicians. A world in which an International Theatre Institute is securely established is a far safer and more civilized world than one in which the art of drama is imprisoned between high national barriers".



Tentative model of Frank Lloyd Wright's "New Theatre", the first he ever designed, to be erected next Spring near Hartford, Conn., U.S.A. The roof is removed.

FILM STAR WITH UNESCAN OUTLOOK VISITS THE COURIER

MYRNA LOY SAYS...

CAN any good thing come out of Hollywood? Can any good thing come out of Unesco? To both of these questions, which the public at large may ask itself sometimes without being too sure of the answers, Myrna Loy, who paid a visit to the Courier office the other day, returns an emphatic Yes.

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Miss Loy was among the earliest devotees in the United States of the Unescan ideal of international understanding through education, science and culture. (She was, incidentally, one of the earliest regular subscribers to the Courier, her subscriber's card being No. 87.) She represented the Motion Picture Industry at the Pacific Regional Conference at San Francisco in 1948. She is a member of the Council for Unesco of South California and is Chairman of its Committee to explore problems of education by films. All of which indicates that Miss Loy has her own opinions in these matters and that her opinions are worth listening to. Miss Loy speaking:

I think maybe a lot of people don't realize how hard the motion picture industry is trying to improve itself culturally, just as they don't realize what Unesco is doing and how much the ideals it stands for mean to everybody, all over the world. People—especially in Europe—see gangster films and knockabout comedy and think that's all that Hollywood can do. But Hollywood does a lot besides that, and it's trying to do more all the time.

In films as in newspapers, there's a tendency to play up crime and sensation, death and destruction, just because those are the things easiest to make exciting without making any special effort of intelligence. From that it's an easy step to the idea that cheap sensation is "what the public wants". Really there's no reason to think that the public prefers bad entertainment. It prefers the entertainment that moves, stimulates, or amuses it most. But it often has to be content with second-rate stuff because the first-rate stuff needs the very best writers to turn it out and the very best actors and producers to make it effective

We know that in Hollywood and we know that constructive ideas can be made dramatic, but we know also that before we can educate the public we must educate ourselves. When I think of education I don't mean just book-learning; I mean learning to value the best interests of humanity and the big constructive ideas that will secure them. That's why I personally and many other people in Hollywood—many more than most people think, perhaps—believe that the work of Unesco and the ideals it serves are so important for all of us today.

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It's not very easy to make that work and those ideals seem real and concrete to ordinary, busy people, and it is very easy for them to get the idea that people who work for the United Nations, Unesco and other organizations like them are a bunch of unpractical dreamers with their heads in the clouds. It's always easy for the "hard-headed"—or thick-headed?—citizen to poke fun at the idealist. What he doesn't realize is that there's no essential contradiction between the ideal and the practical. The ideal thing is the best thing possible, and the most practical thing in the long run.

I think there's no doubt that all worth-while work in films or any other medium means the expression of ideas, and that at Hollywood, just like any other place where people work together, the new idea leads the way. Hollywood instructs through the medium of entertainment, and Unesco can entertain while instructing. It must do so if the education it tries to promote is to be accepted readily and retained in people's minds.

There's no limit to what the films can do for people if they go about it the right way, just as there's no limit to the interest and excitement of education if it's made to be alive, not dead. Films can make war on prejudices—several recent films on the negro problem have done just that. All drama is conflict. Some of the most exciting films represent con-

flicts of ideas rather than fights between gangsters. The first are just as exciting as the second, and more so when their quality is first-class, as it ought to be.

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There's no reason why the lives of good men shouldn't be as exciting and as good entertainment as the lives of bad ones. A good film on the life of Gandhi or Saint Francis would be just as enthralling and would appeal to a much wider audience than a film on the life of Al Capone.

Films can solve personal problems, too, or help people to solve them for themselves, without losing anything in entertainment value. One of my own films, "The Best Years of our Lives", certainly helped a lot of people that way. After it appeared a woman said to me: "I wish I could have seen that film a year ago. Then I shouldn't have divorced my husband".

So you see, we in Hollywood have just the same problems as you here in Paris. We're both handling human material and trying to do our best with it and for it. It's our mission to make people happier by opening and broadening their minds just as it's yours to fight against ignorance and to teach co-operation.

The mission of women? Why, to civilize men, of course! We want healthy babies, not bloody battles. At least we have to practise husband-tolerance, and we think it's time men learnt to practise the same tolerance among themselves.

YOUNG SCIENTISTS SHAKE HANDS ACROSS THE BORDERS

"We rely on Unesco but we know that Unesco, with it limited means, gives preference to those who show that they can help themselves, so we have decided to show what we can do with the limited means at our disposal, and we have agreed on a programme of international exchange of youngsters.

"Next summer, boys and girls from Finnish, Danish, Dutch, French and Swiss science clubs will visit each other and make personal contacts with the friends across the borders with whom, thanks to Unesco, they have already begun to correspond."

It was a young Dutchman, 22-year old Kees Meijers who, after the meeting of Science Club Leaders, made these remarks, without any flourishes and even with a certain shyness, when he came to say good-bye to his hosts at Unesco.

A 15-year old scientist influences industry

Kees Meijers was only one of the leaders of science clubs—i. e. groups of young people who find in science pleasure, adventure, and opportunities for service to mankind — who attended the meeting of Science Club Leaders held at Unesco House on July 15 and 16. The meeting and the exhibition on "Science Clubs at Work" were opened by the Director-General of Unesco, who said :

Though a discovery is not the more meritorious for being made by a young inventor, we cannot help a special feeling of admiration at the thought that before the age of 30, Joseph Black was carrying out his famous investigations into carbon dioxide, Einstein was formulating his theory of relativity, Dirac was revolutionizing the mechanism of quanta, W.H. Perkin was producing the first by-product of aniline and laying the foundations of a flourishing industry. Last year, the laureate of the American Science Talent Search was only 15 and he had already discovered a very important method of synthesizing certain organic compounds. All these examples may fire the imagination of young people and draw them into your clubs.

Gentlemen, yours is the rare privilege of disseminating, humanizing and advancing the cause of science. It enables you to help train men who will be not mere scientists, but citizens with deeper insight into the possibilities and dangers of the world today. Whether they make a name for themselves through far-famed discoveries or merely perform a humble yet necessary task, the members of your clubs will have this in common : they will together have fought against ignorance and prejudice, worked methodically with ever open minds, faithfully carried out their task, great or small, and, with their deeper knowledge of the world about them, will better understand the bonds which unite mankind in a common destiny. You know, gentlemen, that Unesco is ready to assist you in a mission where our purposes and yours are the same.

Spirit of the Young People Backing Unesco

During the meeting, delegates from nine countries heard how youthful scientists are working, from Korea to Copenhagen, from Prague to Paraguay. They heard about the young cave explorers, the speleologists of France, about the young astronomers of Brazil, the young agriculturalists — the 4-H'ers — of the U.S.A., and many other groups.

They discussed how the "prize questions" of the Finnish science clubs, the "annual talent search" conducted by the Science Clubs of America, and the "Science Fairs" arranged by clubs in Denmark and elsewhere, could be duplicated. They passed on to Unesco a set of recommendations, the most important of which asks for a revision of the whole question of science in education.

Another recommendation dealing with the movement originally started by the young Dutchman, Kees Meijers, should be quoted in full as it is linked up with two Unesco conferences which are being prepared of will already be going on when you read these lines. The recommendation reads as follows :

Nature Protection Clubs for Young People

The International Meeting of Science Club Leaders recommends that Unesco approach all societies and associations for the protection of nature and related organizations, and draw their attention to the successful attempts in forming special Nature Protection Clubs for young people which have been made in Holland and Sweden and which could probably be started wherever Associations and Societies for the Protection of Nature exist In so doing, it should be stressed that the Meeting considers it of paramount importance for the future work in connection with nature protection and the wise utilization of resources that the interest of youth in these matters of vital importance be aroused as quickly as possible.

This recommendation should be brought to the notice of the International Technical Conference on the Protection of Nature and the United Nations Scientific Conference on the Conservation and Utilization of Resources (UNSCCUR).

As soon as it was adopted, Kees Meijers rushed out of the conference room. On his return, he explained : "I sent an airmail letter to the Dutch Minister of Education to be quite sure that a Dutch delegation would go to the Protection of Nature Conference".

To this remark, one of the visitors at the conference said : "As long as the work and the ideals of Unesco are backed by the spirit and enthusiasm of people like those I have met here, Unesco is well off."

Unesco Studies Copyright Problems

Unesco, ever since its foundation, has been making efforts to improve international copyright relations throughout the world.

One of its main tasks has been to carry out a comparative study of copyright throughout the world so as to bring out significant similarities and differences in national copyright laws.

When the survey was sufficiently advanced last month Unesco called a meeting of experts on copyright to study the results and to suggest the best means of bringing all the countries into agreement on copyright.

The practical value of such agreement and the assistance it would afford to Unesco's own work in maintaining and increasing the free flow of culture and information throughout the world, were stressed by Dr. Jaime Torres Bodet, Director - General of Unesco, in a message to the committee.

"The world's need, and our desire", said Dr. Torres Bodet, "is that thought with all its power to promote peace and well-doing, shall regain its rights.

"It is in that light, and not in terms of a narrow legalism, that Unesco regards copyright. What we seek is some means whereby thought, too, may recover freedom of action, without which it can have no true blossoming."

On the suggestion of Mr. B.G. Crewe, Board of Trade, London, the experts formally recommended the drawing up of a new Universal Convention on Copyright based on the principle that each country must grant to foreign authors the same protection it grants to its own citizens. Universality being the primary goal, the experts also adopted the suggestion of M. V. de Sanctis, of Rome, that the Convention should contain any other minimum standards of protection to which all countries are prepared to agree.

A New Unesco Radio Service For South America

Since June 30 the Latin-American Section of the Radio Division of UNO has been giving a weekly 15-minute programme in Spanish for all Spanish-speaking countries.

This programme, prepared at Unesco Headquarters in Paris by Prof. Jose de Benito, is entitled "Thursday Commentary" and is broadcast by the following transmitters on the UNO network : WRUL, 11790 kcs., 25 metres ; WRUL, 11790 kcs., 25 metres ; and WES-28, 18920 kcs., 15.84 metres, every Thursday at 10.15 pm, New York summer time.

The first four talks were entitled : The Struggle for Peace, Hamlet's Castle, July 14 and the Rights of Man, and The Marbial Valley Experiment in Haiti.

EDUCATION AND NATURAL RESOURCES

By DAVID SCOTT

It is now fairly common knowledge that while world population increases and world food population tends rather to decline, only a small part of the world's potential food resources are actually being used. The proportion of the world's surface which could be made to produce food is about 30 per cent. At the present time, only 10 per cent is under cultivation. If even the whole 30 per cent could be brought into production, without any tapping of fresh resources or reclamation of land now unfit for agriculture, the world food shortage that threatens us could be staved off for many years — always provided that the food was fairly distributed.

Not only have men failed until now to make full use of the available soil for food production ; they have actually destroyed the productivity of large areas by wasteful or short-sighted agricultural methods and they are still wasting a quite unnecessary proportion of the resources that remain. Worst of all, it is in the areas where production is least abundant and where the people who depend on it can least afford to be careless in this respect, that waste is most rampant, because up-to-date equipment is most lacking and ignorance is most profound.

A Vicious Circle

Thus a vicious circle is set up and conditions worsen most rapidly in the very places where improvement is most needed. Gradually the poorer areas encroach upon those which are most favoured by nature, and their populations come to depend more and more on supplies obtained from their more fortunate neighbours, with the result that, if these conditions are not remedied, there will be eventually no "rich" areas left in the world at all.

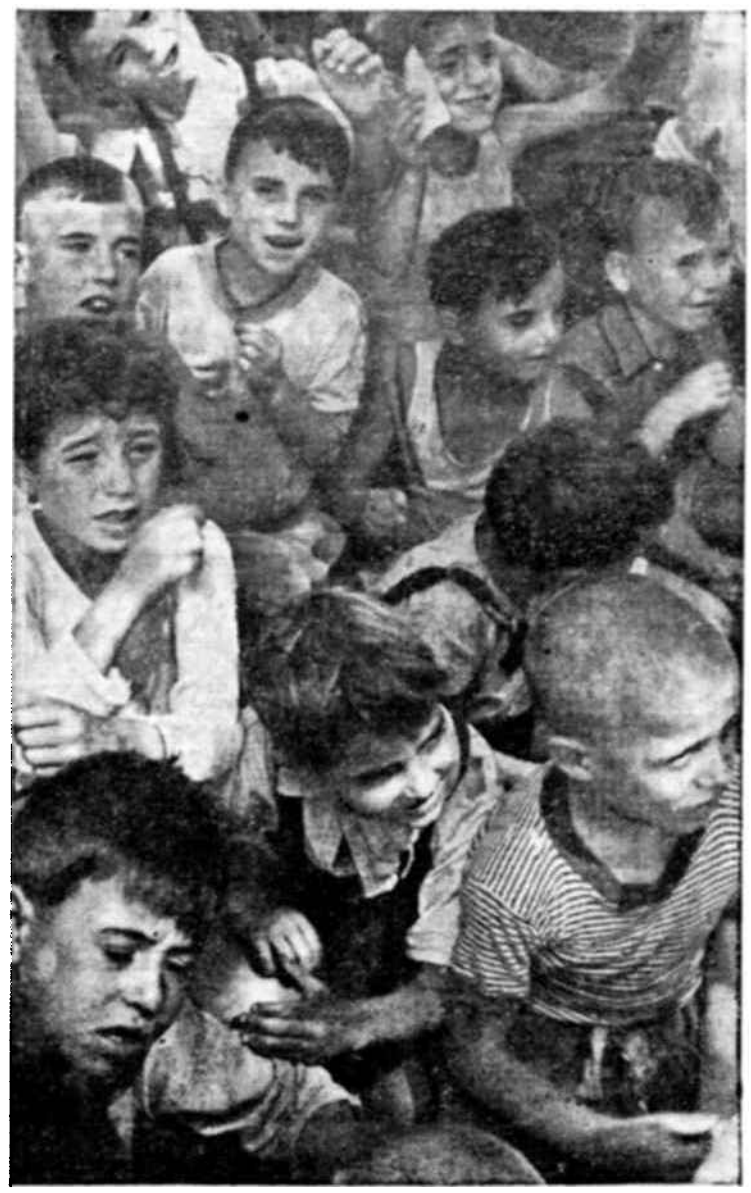
The world's cultivated zones vary enormously in productivity, but they can be divided roughly into two categories: "technically advanced" areas, where favourable conditions have produced a reasonable degree of prosperity for their urban and their rural inhabitants, and "problem" areas, where the masses live on the verge of starvation. Western Europe and North America may be taken as examples of advanced areas; India, China and the greater part of Africa and South America as examples of problem areas. Unfortunately the problem areas account for most of the habitable globe. In these ignorance is the curse and fundamental education is the cure. It may have to begin by combating illiteracy ; in any case it has to be established at the lowest social level and at the earliest possible age, since the best hope lies in a new generation, emancipated from the errors and limitations of the past..

City versus Country

Even in advanced areas, however, education has its part to play. Here the commonest problem is that of the urban population, which lives on the products of the land but knows little and cares less about the means by which they are produced. Cities are among the greatest wasters of natural resources, from the basic foodstuffs to such necessities as fuel and water. They also tend to destroy the productivity of surrounding agricultural areas by polluting streams, by dumping waste on cultivated land, by poisoning the air with factory smoke and petrol fumes and simply by spreading outwards as their populations grow. Here, also, education is called for, but it need not be applied, as in the problem areas, at the elementary level. It must be devised to train technicians and to enlighten adults, rather than to implant elementary knowledge in virgin minds.

Whatever the local conditions and the intellectual level of the people, any programme for training in the use and conservation of natural resources must depend on three elements : research, legistalive and administrative action and, finally education. Research into local conditions and requirements—the state and composition of the soil, the most suitable crops, the best methods of cultivation for a particular area, the need of drainage or irrigation, land clearance or afforestation, fertilizers or pest destroyers, and so on— is necessary before legislation can be planned. But legislation and administrative action alone will be ineffective unless they are accompanied by education, which alone will produce lasting result. The whole population must be induced to cooperate in the programme and have mastered the basic facts on which it rests. Experience has shown that attempts to implant new technical methods and ways of living among primitive populations without fundamental education as their basis are fore-doomed to failure. In one colonial area, for instance, after considerable efforts in this field, the authorities reported before the war that "the native population showed little interest and progress was slight".

This is not to be wondered at if the case of another colony in the same part of the world was typical. Here, according to an independent survey made in 1937, the troops of the European garrison (who were the only executive agents on the spot) were ordered to see that the natives adopted more up-to-date methods of agriculture. But the troops themselves were given no preliminary training in such matters, and they had no idea how to set about their duties with the natural result that the programme got nowhere. This was a perfect example of how not to do it : the blind led the blind, and both fell into the ditch.



"Education is the cure" . . . Children of an open-air school in Italy.

(Continued on Page 9.)

UNESCO
COURIER
Supplement

POPULARIZATION OF SCIENCE

"Scientists pool their efforts within Unesco, but what we call the world centre of scientific liaison is not just for the benefit of the few professionals. It is an effort to make scientific knowledge more accessible to everyone. WE ARE ENCOURAGING THE POPULARIZATION OF SCIENCE. The great objective of Unesco's intellectual cooperation is to improve the living conditions of the great assocations of human beings."

Dr. TORRES BODET,
Director-General of Unesco.

We Must Increase the Dosage of Science

says RODOLFO TALICE

Professor at the University of Montevideo

THE first popular scientific exhibition ever held at Montevideo, capital of Uruguay, was visited by more than ten percent of the town's inhabitants during the twenty days it was open in 1948.

THE same exhibition, which was later shown in the capital of a province, 400 kilometres distant, was visited by half the local population.

WHAT does this mean? That the masses want to know what is happening. To inform them is a tremendous task.

The Latin American people have a more or less developed general culture, but there is an insufficient "dose" of science. This insufficiency of scientific culture applies to all classes, even in the most advanced centres. The inevitable accompaniments of this are the poverty of native science, the scarcity of scientists, the lack of encouragement for research, limited credits, a certain general indifference, and resistance on the part of the lower classes to the changes which the new developments impose on modern life.

But, clearly, the blame cannot be placed on the shoulders of the people. Government and political leaders often speak of social problems, which they study and try to solve; usually scientific principles are completely absent from their investigations.

In universities, scientific activity takes second place: instruction in the main is for professional training. During the past few years, there has been some progress, but each step forward is the result of a struggle among university directors or in parliament.

Scientific work continues to be the result of isolated, individual effort accompanied by sacrifices and often by some heroism.

This disregard for scientific activity exists generally. The professional man who devotes himself to research instead of practising his profession, is held to be a failure. Donations from rich people for scientific research are the exception in Latin America.

The objective, scientific education given to young people leaves much to be desired. It should be added that in speaking of science, what is usually meant is the science of observation and not of experiment and research.

Finally, when science is considerered at all, it is spoken of as something harmful.

But there is a favourable side. The lack of tradition allows of quick changes in public opinion. Generally, people are willing to absorb information if it is presented in an acceptable way. There is widespread curiosity, for example, about new techniques.

There is, I believe, a great need for scientific information, but necessarily, it must come in large part from abroad. Unesco has a tremendous favourable field in which to work on the popularization of science.

(Continued en p. 8)

THE CHOICE FOR MAN : A GOOD LIFE OR AN UNHAPPY DEATH

by

Watson DAVIS

Time and time again, through the activities of press and radio, a life is saved through a newly-reported treatment, a novel industry or process is introduced in a new location, or an old idea is shown to have a new application.

IN fact, the understanding of science by the people is much more than the practice of devotion to truth or the satisfaction of intellectual curiosity and thirst for knowledge.

It is the difference between a good life and an unhappy death—often for individual men, women and children, and, in all probability, for the modern world and civilization itself.

In the three decades subsequent to the first World War, great discoveries have become part of daily life. We are often, however, to forget the part that simple explanations of great ideas have played in moulding the physical world and the way we think.

Influence of Einstein

Einstein's theory of relativity and the strange ideas of quantum theory have trickled dramatically into the philosophy of living, although the circle of mathematical physicists is still a small one.

Healthiness as contrasted to illness of mind—the positive side of psychiatry—has received an impetus from those who brought sanity to the treatment of insanity and the unshackling of sex by Freud.

Mechanical and electrical wonders have been developed—airplanes, automobiles, diesels, radio, television, and a dozen other specialities that after a few months become so much a part of our mores that we forget how young they are. We forget that when new—and therefore strange—these commonplaces of today needed explanation that would make them plausible.

Diabetes, pneumonia, the venereal diseases, and a host of other ills within the space of a few years have been deprived of their ability to sign death warrants or cause broken lives. No physician in the early days of our new era of science understanding would have dared to hope that a single drug would conquer two-score diseases. Yet the sulfa drugs and the antibiotics—penicillin, streptomycin, chloromycetin, aureomycin — do make these deadly diseases less troublesome than the common cold.

To the food of the world and the farms of the earth, new aids and supplements have come—nitrogen from the air, chemical insecticides, better management of the soil, frozen foods, etc. Vitamins have been discovered and so have protein quality and the need of seven classes of food which will build better minds and bodies of a better-fed population.

The ill-fed third of the world have at least been recognized. The spotlight of publicity is playing on the weak and hungry. Starvation, partial or complete, is not condoned with hopelessness.

The means of reaching the millions —the daily newspaper, the popular magazine, the voices of the radio, the film, the books of fact and fiction, the measured cadences of information circulating through official channels, and the blaring insistence of advertising—all of these are closing the gap between discovery and application.

Often the public hears through the press about a new medical discovery and about the availability of a new drug before the average doctor has a chance to study his medical journal.

Importance of Science-Writer

The science writer is often a catalyser as well as a reporter. When the fission of uranium, basic to atomic energy, was discovered in Germany, in 1939, Science Service, the American non-profit organization for the Popularization of Science, called the scientific report to the attention of scientists; and also told the public through the press about its significance, including the vital fact that an atomic bomb was probable, as energy for industry could be extracted from the atomic nucleus—and an uncontrolled chain reaction would not get started and wipe out the world.

Insulin for diabetes, liver for anaemia, sulfanimide for child-birth fever, streptomycin for tuberculosis—these were great life-saving stories when they were new. They are a continuing opportunity to explain the possibilities of modern medicine to the people.

Great Stories to Come

What has been is only the beginning. There are great stories of scientific discovery and application in the making.

If such things happen it will be because the people continue to support the advance of science, spiritually and financially, and the talented have a chance to do research. We must be confident that the people will do this if they are allowed to know the facts and implications of the most thrilling area of human advance—modern science.

THE MAYOR who changed his mind

This is the story of the mayor of a small South American town who was forced to change his mind by his fellow-citizens.

To this mayor went a letter from the Department of Health asking if he had money available for spraying houses with DDT.

He replied: no funds available.

Two days later, followed an urgent cable. It said that money had been obtained, and asked when the spraying could begin.

What had happened was that the local inhabitants had learned of the mayor's reply. They had disagreed violently, because popular science articles had informed them of the benefits of DDT.

A meeting of the town council was summoned hurriedly, and the mayor was persuaded to change his mind.

One of the main features in the popularization of science programme of Unesco is to stimulate young people to take an active interest in science. The youngsters are members of a Danist Science Club who, under the guidance of a scientist, made excavations in Jutland.

• RITCHIE CALDER, world-famous science writer,

tells the behind-the-scenes story of a four-years-long scoop

Lord Boyd-Orr Helped To Make An A1 Nation

SCIENCE correspondents, like all journalists, are interested in scoops—the new discovery or development which "makes the headline". But this is an account of a "scoop" which took four patient years to achieve.

IN 1932, I was doing a series of scientific articles on what was happening in British laboratories, and, without much enthusiasm, visited the Rowett Research Institute, Aberdeen, to discuss animal nutrition—"menus for pigs", as I irreverently called it.

NOR was the Director very enthusiastic about my visit. Indeed, his attitude made me curious and over a reluctant cup of coffee I remarked, "Dr. Boyd Orr, you seem to be a man with a chip on your shoulder". And discovering that he had a sympathetic listener, he told me what that "chip" was.

IMPORTANCE OF NUTRITION

"I can persuade farmers to take an interest in nutrition," he said, "because I can prove to them that it pays dividends in terms of their stocks and herds. But I cannot get them interested in the nutrition of their own children, let alone the children of other people. Yet I can prove as a scientist and as a doctor that that would pay incomparably greater dividends"

Science Through Film

The Popularization of Science Unit is regularly furnishing the Field Science Offices in China, Egypt and Uruguay with news on scientific and popular scientific films. It has procured films for China, Denmark and several Latin American countries. It has furnished newspapers and weeklies with special material on scientific and popular scientific films.

He told me of his rankling frustration. He had fed 200 children, of underpaid miners in Lanarkshire, on milk for a year. He had a control group of similar children, who did not receive supplementary diet.

The contrast between the two groups conclusively proved his argument. The milk-fed children "blossomed before his eyes". But in the depression years, when the lesson was even more important, the scientific survey had been "lost". Dr. John Boyd Orr was an unhappy man. Why couldn't be get the public to listen?

As I told him, that was my job. The immediate article on "The AI Nation of Tomorrow" put his argument before two million readers at a critical moment. It awakened popular interest in nutrition, as something more than "diet" or a vitamin cult.

That was not as important as the sequel. Subsequent discussion helped to stimulate an interest in the scientific aspects of the Government's programme for the revival of agriculture, in terms of human needs, and Dr. John Boyd Orr undertook a classic social survey of the relation of food, health and income.

Science Through Radio

The Popularization of Science Unit has, from Unesco House, arranged broadcasts to the United States, over the C.B.S. network. It is a steady contributor to the Unesco World Review. It has made recorded broadcasts from N.B.C. and the Lowell Cooperative Broadcasting Council available to Radio stations in Europe and elsewhere. Several European radiostations have been given help in planning Popular Science programs.

The results, as they emerged, were startling and would, at any stage, have made good journalistic copy. But for four years I had to practise a self-denying ordinance until the facts were fully marshalled and scientifically appraised.

In 1935, I "got my scoop". Dr. Boyd Orr announced his results at the British Association. As his confidant I acquired journalistic merit by the fully informed account, with all the significance that others missed, and with social repercussions which are still reverberating.

A MAL-NOURISHED POPULATION

THE "Food, Health and Income" survey, scientifically documented, showed that in Britain half the people did not then have incomes which would guarantee them the diet necessary for health and well being, and that one-tenth of the population was definitely under-nourished.

The impact on Britain was immediate. Committees Against Malnutrition supported by eminent scientists and public figures began a drive which had political effect. The international outcome was the Mixed Commission of the League of Nations, which "married" health and agriculture, and initiated in Member States a series of similar surveys.

That in the United States of America, the richest country in the world, paralleled Orr's results. Elsewhere the evidence was even more disturbing.

In Britain, this investigation and the popular interest it created prepared the "climate" for the painless and spectacularly successful rationing system which brought Britain out of six years of war a healthier nation than when it had entered it.

RESULTS FINALLY SEEN

THEN international results were seen in the Hot Springs Conference and in the foundation of the Food and Agriculture Organization of U.N. at Quebec, where Sir John Boyd Orr was elected the first Director-General.

When, at the Famine Conference in Washington, Sir John Boyd Orr made his final speech which roused the weary delegates to enthusiasm and acclamation, Sir John asked me what I thought of his speech. My reply was, "I have liked it better every time I have heard it for the last fourteen years".

With that remarkable constancy which has made Lord Boyd Orr a world scientist-statesman, he was saying in that vital assembly (which delivered 70,000,000 people from the threat of privation), with more-facts but no more emphasis, what he had said to me at the Rowett Institute when I arrived in quest of "menus for pigs".

'I Am Grateful To Scientific Boswells'

To more than the art of printing, however, do we owe the successes and pleasures of our vicarious adventures in science. We are also greatly indebted to those who can write and will write in terms of our limited comprehension.

Not all the scientists have the facility. Sometimes the talk is too tough for us, or too curt. They have not the time to be lucid on our level and within our vocabulary, or perhaps their mental intensity has stunted the faculty of sympathetic explanation.

When such technical barriers exclude from the scientific workshop, it is then we like to consult with a clear-spoken and understanding interpreter.

We sit on the back porch of the laboratory, while he, as middleman, goes inside to the obscurities and mysteries, to return occasionally with comprehensible reports. In listening to him we hear not only his voice, but the overtones of the master he interprets.

I like these men of understanding who play Boswell to the specialist. They often have a gift greater than that of the concentrated workers whom they soften up for us.

For they have breadth and perspective, which help us to get at the essence of a problem more objectively than we could even if we were fully equipped with the language and knowledge of the fact-bent explorer and analyst.

The scientific interpreters frequently enhance our enjoyment in that they give us of themselves, as well as of the discoverers whose exploits they recount. We are always grateful to them, moreover, for having spared us labor and possibly discouragement.

HARLOW SHAPLEY,
Director, Harvard Observatory.

MORE SCIENCE WRITERS NEEDED

There are now more leading men of science capable of presenting their specialized knowledge to receptive minds than ever there were; as is evidenced by B.B.C. "feature broadcasts" from time to time. On account of the expansion of science teaching in schools and colleges and the everyday use of products of applied science, many more people have their minds directed to the implications, technical and social, of scientific knowledge. There are plenty of expositors of science capable of constructing stories of informative value to the general public in readable language, but few opportunities are available for the publication of such articles in the general Press.

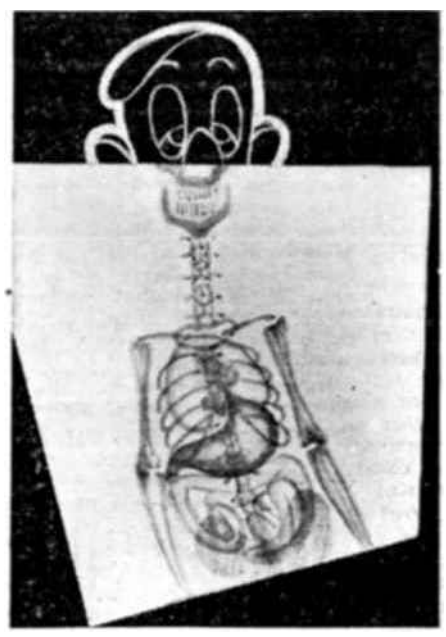
The "Sunday Times" has recently introduced a feature of this kind in fortnightly articles by Dr. Julian Huxley, who always writes with first-hand knowledge and the lucidity of De Quincey's "literature of power". It is to be hoped, but not much to be expected in these days of paper shortage, that other newspapers will follow this example. It is of little use to encourage popular expositors of science to cultivate similar powers of literary expression, only to find themselves still unwanted in the fields of scientific journalism.

Sir Richard Gregory, Bt., F.R.S.

More Use

BUT THIS QUESTION I THE WHOLE PROBLEM

THE value of the film for the popularization of science is closely bound up with its future development as a medium. Because it has been widely associated with entertainment and entertainment techniques, its other uses as a medium have been impeded.



A vivid presentation of the human skeleton as depicted in a British Ministry of Health educational film.

Today the enormous appeal of the public cinema is not utilized to any full extent for popularization. Some countries have taken the step of introducing legislation requiring the inclusion of one documentary film in every cinema programme.

There are other developments, particularly the production of films in a group or series. A group of films is easier to market commercially, and has the merit of achieving a greater cumulative effect on the public. For example, the Amer-

Reports on Popularization of Science

Would you like to make a better acquaintance with Arthur Elton, Sinclair Road, and J.L. Crammer than their articles on these pages permit?

You can do so very easily by writing to Unesco for copies of their full reports:

"Popularization of Science through Film", and "Popularization of Science through Cheap Books".

Other Reports dealing with aspects of the Popularization of Science are:

"Popularization of Science through Science Clubs", by Borge Michelsen;

"How To Conduct a Science Fair", by Borge Michelsen;

"Science Service", by Borge Michelsen;

"Methods of Improving the Coverage of Science", by Herbert B. Nichols;

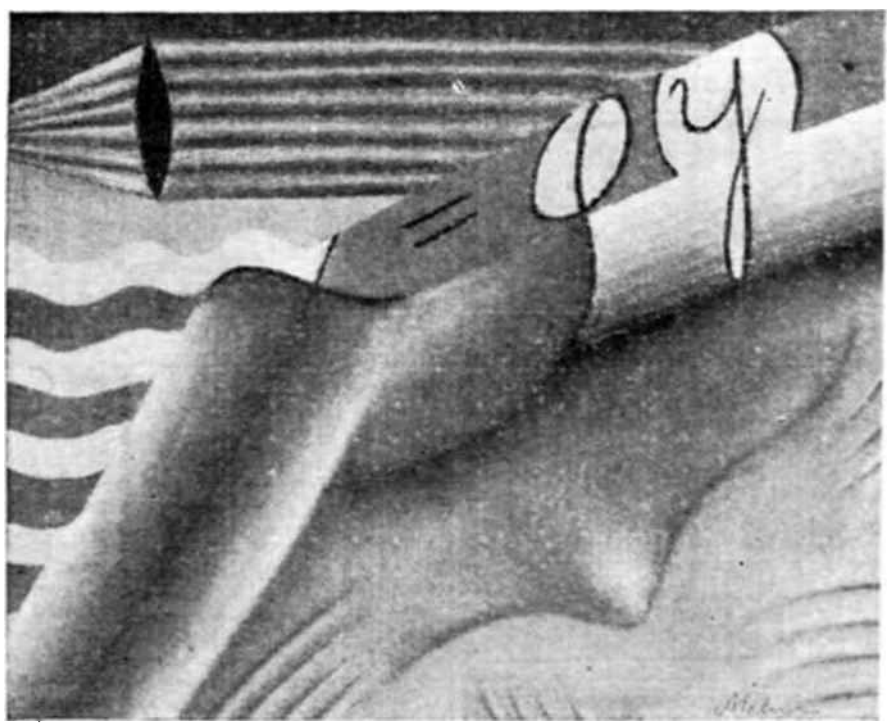
"The Public Be Informed", by Watson Davis.

"Associations of Science Writers: The Case for Their Stimulation and Development", by Maurice Goldsmith.

In preparation for early publication are:

"The Story of ICSU (The International Council of Scientific Unions); and

"Science Writing Awards".



Emotionalism in Science

Dr. Frank J. Malina, an aeronautical engineer on leave from the California Institute of Technology, is Deputy Head of Unesco's Natural Sciences Department. To him science inspires art after the day's work is done. Dr. Malina's pastel has been interpreted in words by Watson Davis, Director of Science Service, Washington :

"When a scientist views a picture with the analytical insight of reason and detailed comprehension he must lose or overlook some of the meaning injected into the creation, particularly if it is either the emotional vapour trail or the preceding shock wave of a distinguished rocketeer. Certainly science functions mentally and physically and x, the unknown, is always a function of y, synonymous with either something known or perpetual interrogation (à l'anglaise). *"Science focuses and brings to a point parallel activities and lines of thaught. Energy is an undulatory motion in most instances — or the stripes of the flags of many nations run together in international scientific co-operation. The beauty of curves may mean applied biology to some or merely the beauty of form to others. The wrinkles that impress themselves may be merely those that will be erased from a worried world by science skilfully and sympathetically applied. Or they may be a symbol of the quiet necssity of age."*

Others who combine science and art are invited to submit details to Unesco's Division for Science and Its Popularization.

The Role Of Cheap Books

IN planning to use books to spread information about Science we have to think realistically, quantitatively, in detail.

What sorts of people, and how many of them, are reading books on science now? Does the price of a book in actual fact stop some from reading it?

What is our aim in spreading scientific enlightenment? A statement of our ideals indicates for whom our cheap books must be written, and what booklists we should develop as publishers.

by
J.L. CRAMMER
Editor of Penguin Science News

Finally, why do books cost so much? The answer to this may help us to produce them more cheaply.

I am going to discuss these questions in turn, using British experience.

The first group of questions is unfortunately difficult to answer because very little research has been done on reading habits, and little is known about the sort of people who buy books and why they buy them. But something of the situation can be gathered by collecting a few statistics from publishers and comparing their sales with the size of the population (see Table I).

Even from the few figures of this table one or two conclusions are indicated. Firstly, price is not in itself a determining factor: the book with a record sale is the most expensive of the three, while the medium-priced one sold more than a cheaper book by the same author (Sir Arthur Eddington) until the latter was published by Penguins. Most scientific Penguin books sell editions of 50,000 to 100,000 copies, so it did well.

Secondly, it looks as though we are doing well if 1 in 500 of our population buys a book. Is this good enough?

Another way of trying to gauge public interest in Science is to study what kinds of books are borrowed from free Public Lending Libraries. Table 2 gives a few figures for a city I happen to know quite well, one which is industrial, with a University College, a technical school, and many ordinary schools.

The issue of science books actually includes a certain number of textbooks

TABLE I.

Title of book	Sale in Britain	Notes
"Mathematics for the Million" (published 1936 at 12/6)	195,000	Translated into 14 languages (Finnish and Swedish editions 17,000 each; USA 151,000)
"Nature of the Physical World) (published 1933 at 8/6)	26,213	Translated into 9 languages.
"The Expanding Universe" (1933) at 5/ ..... at 1/	16,840 105,000	by the author of the preceding book. (Penguin edition)
Population of Britain		48,000,000
Doctors in Britain		56,000
Members of Associations of Scientific Workers		18,000

borrowed by students for their academic work. But, ignoring this, we see that under conditions where the books are free, only 5.6 0/0 of those taken for reading are on science, and the number of these could be accounted for entirely if the educated groups separately listed in the table drew five books each in the year.

Or take it on a national scale. If a Penguin book of a medical interest sells 50,000 copies, how do we know that it has not been entirely bought up by the doctors of the country, just to see what it is like? If this is really what happens the effectiveness of our popularization leaves something to be desired.

So we come to the question who are these popular books for, who are the people we want to reach? Insofar as a high standard of living may make for peace and democracy, science can certainly bring this high standard of living.

TABLE 2

(all figures approximate)
Total population : 278,000 (all ages) consisting of

Doctors	130	
Druggists	80	
Works chemists	50	
Graduate teachers	250	
Non-graduate teachers	390	
University, faculty and students...	500	1,400
Central Lending Library, total non-fiction (1946-47): 121,500 ; science books only : 6,800.		issues of issues of

To do so, in an undeveloped country, more than a few scientists are needed. The political leaders must be aware of what science can do for their country, and there must also be a nucleus of trained technicians to work the factory processes and the new agriculture.

(Continued on Page 8.)

Must Be Made Of The Public Cinema

IS BOUND UP WITH THE WAY IN WHICH M OF SCIENCE IN EDUCATION IS TREATED

ican March of Time *and the British* This Modern Age *series, as well as specialized magazines like* This Is Britain, *for audiences overseas;* Mining Review, *for coal miners; and the Shell* Cinemagazine. *(It should be noted that none of these magazines deal specifically with science, the exception being provided by the Soviet Union where special scientific film magazines are produced.)*

The newsreel, too, has the merit of continuity and could be utilized to a far greater extent to present regular items of general scientific interest.

The feature film, generally speaking, has not proved a suitable medium. (On the other hand, its power to encourage and maintain unscientific attitudes requires constant attention on the part of scientists.)

A great deal can be done to develop the use of films about science among community organizations. This non-theatrical distribution is not, however, economically self-supporting.

It requires a large measure of public support in the provision of library facilities and projection machinery. Because non-theatrical audiences are prepared to pay much more attention to the films they see, money and effort put into this kind of distribution can be of far more lasting value.

The encouragement of local film groups is also of the utmost importance, as well as of national scientific film associations—along lines on which the International Scientific Film Association is already working.

In the production of films popularizing science, the maximum amount of government and non-government sponsorship should be encouraged. Sponsoring organizations, particularly public bodies, should realize the value of developing an understanding, not merely of the facts of science and its application to particular areas of activity, but also the actual everyday use of scientific method as well as the citizen's responsibility for the ultimate use and control of the discoveries of science.

Greater care should also be taken to relate subjects described to what is within audiences' experience, since a certain familiarity is an essential basis for further understanding.

Finally, national and international scientific institutions could profitably pay far more attention to the value of mass-media. Authoritative statements by such bodies about the actual and potential use of films on science could influence very positively governmental and other agencies responsible for film production.

But, ultimately, the fate of scientific popularization, whatever the medium used, must depend on the seriousness with which the whole question of science in education generally is treated in each individual country.

by
ARTHUR ELTON
Director of the British Film Institute
and
SINCLAIR ROAD
Secretary of the Film Centre, London

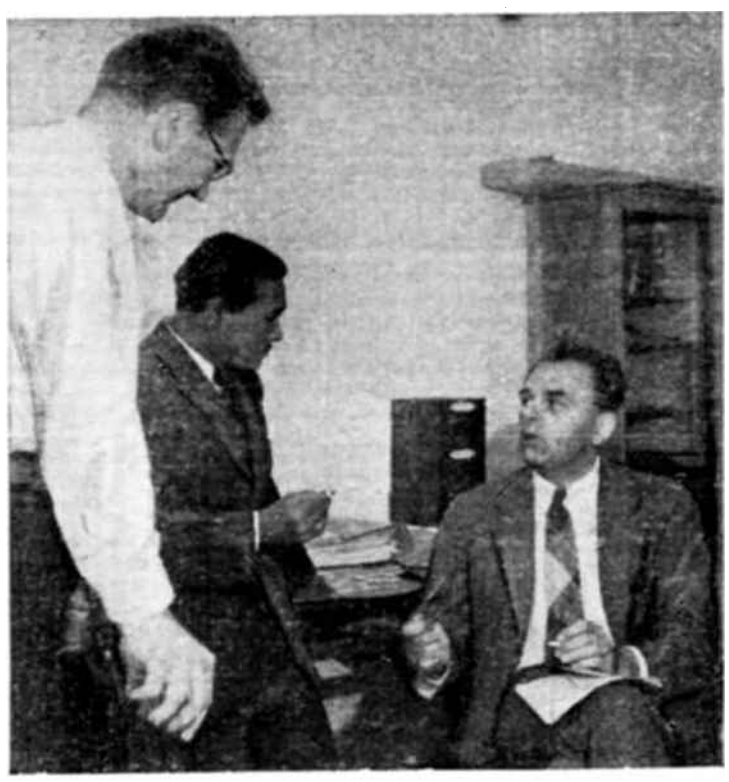
The instruments for the Popularization of Science are many. They include the Associations for the Advancement of Science, Science Clubs, the science writer, radio, the film, the museum, the mobile exhibits, the book, television, and the comic strip.

The Section for the Popularization of Science is concerned with fostering their development, and where necessary, initiating their growth.

Only a few examples of how these instruments can be used are mentioned in these pages. More can be learned about them by writing to Unesco. Do not hesitate to do so.

Science Through the Press

At the initiative of the Popularization of Science Unit popular scientific weeklies and magazines in U.S.A., France and England have been brought into contact with one another and have started exchange of articles. Several newspapers have been given help in making special supplements on the significance of science to daily life. The unit is a steady contributor to the Unesco World Feature Service. In addition, it has, on request, furnished newspapers and magazines with special news-items and distributed articles on Protection of Nature and Utilization of Resources for the Economic and Social Council. It is editing the Natural Sciences series of occasional papers.



The Section for the Popularization of Science is working in close collaboration with scientific organizations, such as the International Council of Scientific Unions (I. C. S.U.). Above, a member of the Section is planning a conference with members of the I.C.S.U.-Committee on Science and its Social Relations. Professor Bart Bok, U.S.A. (right), speaks to Professor Rehberg, Denmark (left).

A member (left) of the Natural Sciences Department shakes hands with the Lebanese Minister of Education at the opening of the Scientific Exhibition at Beirut.

SCIENCE AND DEMOCRACY

SOME years ago a small country entered into a contract with a foreign oil company, selling the right to utilize all minerals that might be found in its underground.

Nobody protested and the company started work; but when indications of the presence of oil were found, the government was severely attacked.

It was stated that native scientists long ago had predicted the presence of valuable minerals, such as oil.

Why, it was asked, had the government not paid attention to them and thus kept the minerals for itself, that is to say, for the citizens of the country?

From the debate which followed it appeared that some of the persons responsible for the bargain had heard about the seismological, gravimetric and magnetic investigations upon which the scientists had based their views but none had really understood what it was all about.

None of them, as they frankly admitted, understood the language of the scientists, the way in which they expressed themselves.

Public opinion required a scapegoat. It was found by a journalist, who wrote an article saying:

"I am the scapegoat in this affair, and so are you! *In a democratic society like ours we are all responsible for the slips made by our representatives in Parliament. We could have stopped them but did not do so. Let us watch them more closely in the future. Let us learn more about science!"*

Government officials time and again need a knowledge of science to make intelligent decisions. If the decisions are wrong, not only are the government officials to blame, but also the voters backing them.

As the language of science today is made up of symbols and dialects that are unintelligible to the public (and sometimes even to those specialists working in adjacent fields), a new profession has been created: journalists who are specialists in interpreting the language of the scientists, the science writers.

The need for such specialists was clearly felt in the country mentioned above when the "oil affair" came up. But too many countries are still waiting for such an "affair" to hit them.

UNESCO must make known to the greatest possible number of people, not only the scientific achievements and their applications, but the trend of scientific progress. The public must be constantly informed of living science, that is of science under construction. The public must expect new and important scientific progress in the future. It must not lose its head over new developments to come.

Dr. P. AUGER, Head, Department of Natural Sciences.

SCIENCE THROUGH TELEVISION OPENS A NEW FIELD

TELEVISION, the most-talked of means of communication today, is being used as an instrument for the Popularization of Science in the USA, England and France.

In England, science and scientific topics are gradually entering the world of television in three ways: first, by talks and demonstrations in the studio; secondly, by outside broadcasts; and, thirdly, by the use of films.

Since television with its marked sense of immediacy, reality and intimacy is quite different from the recorded material of film, the BBC has naturally tended to restrict its presentation of scientific material to the first two methods whenever possible.

Sudio programmes have covered a wide range of topics and have included eminent scientists such as the Astronomer Royal, and also demonstrations of various medical subjects such as Blood Transfusion, Physiotherapy and Mass Radiography.

Wide Range of Topics

A recent series of programmes was the outcome of a demonstration by Jean Painlevé, at the end of 1948, that it was possible to televise small living organisms direct with the microscope and without the use of an intermediate film.

The "Under the Microscope" programmes were used very successfully to show audiences some of the methods of biological research, and to indicate the importance and usefulness of scientific research.

Demonstrations of this kind have been given by Dr. M. Abercrombie of University College, London, and also by Dr. A.F.W. Hughes of the Strangeways Laboratory, Cambridge, who demonstrated the recently developed Phase-Contrast microscope.

The use of the microscope directly with the television camera is, however, subject to several disadvantages of an optical nature, but these could probably be minimized with improved television cameras or, in certain cases, almost overcome by the use of an intermediate film.

Visit to the Royal Mint

A smaller number of outside broadcasts of a scientific and technical nature have also been given, notably a visit to the National Physical Laboratory at Teddington, where the Wind Tunnel was demonstrated, and also a visit to the Royal Mint. It is believed that programmes of this kind will become more frequent.

Scientific film programmes have been used rather less, but there was a special presentation of scientific films in the autumn of 1948 on the occasion of the International Scientific Film Congress in London.

It may be, however, that a regular science film magazine will be started before very long.

by

R. Mc V. WESTON

BBC television science adviser.

Although films are not used when a direct, living programme is possible, the film still remains superior to television—and in fact unique—when it becomes essential to change the time-scale. This is not possible with television and film must be used in cases where motion is either too rapid or too slow to be appreciated by the eye.

Accelerated motion by means of time-lapse films taken in conjunction with the microscope have been used by Dr. A.F.W. Hughes, and super slow motion has been used in some scientific films made by the Shell Film Unit.

While all the above programmes were transmitted to the public, mention must also be made of the use of television equipment with closed circuits for special purposes, such as the transmission of images of surgical operations for study by students outside the operating theatre as now done at Guy's Hospital, and the use of the television camera in the Maternity Wards of University College Hospital.

COMIC STRIPS Teach Science

New development in popularization of science is the use of the comic strip. This has been done in the main in the U.S.A. and the above secion of a strip is taken from a comic book prepared by the General Electric Co.

It is believed that cartoons are particulary useful, not only for lower school education, but also for illiterate groups. Techniques for their use are being developed, especially in relation to underdeveloped areas.

The Role Of Cheap Books

(Continued from p. 7)

Popularization has, therefore, an important job to do in attracting recruits for training as technicians and scientists. A target we must always have in mind, therefore, is the older boys and girls at school, and the students in colleges and universities.

The older the man the harder he is to convert to a new idea. Our popular books are therefore often better aimed direct at the senior schoolboy, rather than at the master who teaches him.

It is an interesting fact that many popular scientific books are read by professional scientists. The reason is that modern science has become so vast and specialized that an expert in one field is often completely ignorant in twenty-nine others, and quite unable to follow developments in subjects which would not only interest him but quite possibly influence his own scientific work if he was aware of them.

Popularization has a role of growing importance to play here in preventing the threatened fragmentation and collapse of the scientific world through extreme specialization. I know from experience that a periodical such as "Penguin Science News" serves this function, though it was not started with that intention—in fact, when we began we were ignorant of the need.

Soon we begin to see that the purposes of popularization may be well served without our reaching the major part of the population. Because we refer casually to "the people" of a country we must not be fooled into thinking of them as all equal units of individuality.

Some are housewives, some are sailors, or greengrocers, or schoolboys, or nurses, or lawyers, or bankclerks, and each group within the democratic community has a different education, a different experience of life, different interests and different influence in society. Some are not interested in science and never will be, or are even antagonistic to it because it makes more fearful war weapons, or is complicated and difficult to understand, or upsets cherished beliefs.

But we do not need to worry unduly over these antagonisms, which it will take more than cheap books to alter in any case. If we can reach the young and the administrators and the scientists, we shall be going a long way to achieve our aims.

Finally, finance. Publishing as a business is beset with difficulties. The bookseller takes one-third (in some countries, half) of the selling price of a book for himself, whatever the size of the selling price. In consequence, he is not interested in selling cheap books if he can sell expensive ones, and some booksellers refuse to stock the cheap ones altogether.

Of they money the publisher receives, a great deal goes for printing and paper, and the author gets very little, quite possibly less than he would if his book had appeared more expensively and sold fewer copies. In periods of unstable prices and inflation the cheap book with its delicate costing and very narrow profit margins is likely to turn into a liability overnight, where a more expensive volume can weather the financial storm.

Then there are all kinds of international difficulties : tariff barriers to the importation of foreign-printed books in some countries; difficulties of exchange, where dollars are scarce; extravagantly high local labour or printing costs. There is work here for Unesco: to smooth out some of the barriers.

We Must Increase the Dosage of Science

(Continued from p. 5)

The idea of a mobile scientific exhibition, which is being spoken of, is magnificent. Its success will be certain, providing that the subjects are well chosen and the exhibition allows the viewers to take part. Visitors will be attracted by practical demonstrations and films, and not only by lectures.

An excellent subject is biology in all its forms. In addition, in each country the Unesco exhibition should include a section on native science

Finally it is to be hoped that some of the specialists accompanying the mobile exhibition can stay for a period long enough to ensure the formation of science clubs, which will stimulate and develop the newly awakened local interest in science.

I know that my country could be transformed if full use were made of science and technology. To do that requires a major development in mass popularization of science at all levels. The immediate road ahead is difficult but it is well worth treading.

BOYS' TOWN in Italy

The war left 400,000 Italian children orphaned, homeless and destitute, roaming the countryside and living by their wits . . .

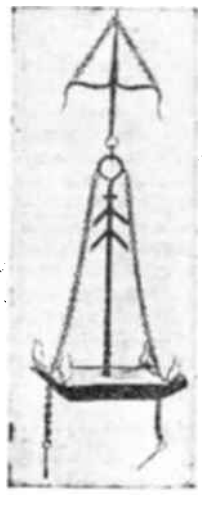
ON Christmas Eve, 1945, a little priest called Don Guido Visendaz arrived in the Italian mountain village of Lanciano where, he had been told, a gang of vagabond boys—the riff-raff and sweepings of war—were living like savages in the half-ruined Santa Chiara barracks.

Don Guido had heard that the boys, typical of many of the 400,000 children left homeless by the war in Italy, had been roving the countryside, stealing and living on the proceeds of their robberies, before being rounded up by the police at Lanciano and locked in the stables at the barracks.

Making his way to the barracks, Don Guido pushed open the door and was met by a chorus of jeers and catcalls from the boys who, ragged and flea-bitten, lay shivering on the bare stone floor.

You can help the children of the "Villagio del Fanciullo", who need financial aid, furniture, bedding, clothing, school supplies, art and music materials and textbooks in Italian. Gifts should be sent to Villagio del Fanciullo, Silvi Marina (Pescara - Teramo) Abruzzi, Italy.

Don Guido, who had been a chaplain to the Italian troops and a prisoner in Germany, was a cultured man who could easily have found a quiet post in a seminary. But the boys were a challenge to him. He went to the town hall and persuaded the council to remove their guards and chains and let him take over the care of the boys.



Don Guido realized that he must gain their confidence before he could hope to improve the material and spiritual conditions under which they were living. He began by sharing their miserable existence and living quarters.

First of all he shoved them how to clean up the stable and one day he began to plaster the broken walls. The boys watched him sullenly for a while and then they too began to work. Very soon he had them decorating the walls of their one-time prison with painted figures.

Other young orphans heard about the community at Lanciano and came to join it. They were accepted without question, shown the rules they must obey and told they were free to come and go as they pleased.

The Little Clown

Under the conditions of poverty and want suffered by the community at that time, it was only the faith of Don Guido and the spirit of hope among the boys that kept it alive. One of the best illustrations of this spirit is the story of a little boy named Romano, who came to join the group.

Romano belonged to a circus family. His father and two brothers were killed during the war and his mother died later of a brain tumour. Orphaned and destitute, Romano wandered aimlessly across Italy until one day when he arrived at Lanciano. "What can you do?", he was asked. "Well", he replied, "I cared for my mother when she was ill. If you have sick boys I could look after them".

Soon there were eighty boys aged between 5 and 18 at Lanciano and the community was forced to take over the entire ground floor of the barracks. But the boys remained undisciplined and some of them even went out at night to rob nearby houses.

Threatened by the police and angry citizens, Don Guido called the boys together and made them a proposal. "I must be free to try and get the food and clothes and other things you need", he told them. "In future you must be responsible for the discipline among yourselves. Otherwise I shall leave you".

SILVI MARINA: The stone jar commemorates the first hard summer's work.

After this there were no more complaints from the local people, and inside the community, a striking change took place. The boys worked out a "constitution", established a bank and a court of justice and elected a mayor and storekeepers.

The Cross and the Pine

This, then, was how the Villagio del Fanciullo—the Village of the Child—came into being. Outside the barracks stood an old pine tree from which the boys had cut branches for fuel. The top remaining branches were roughly in the shape of a cross. This gave the boys the idea of a symbol for their community—a green pine surmounted by a cross.

Gradually the Villagio's activities expanded to include carpentry and shoemaking. Gifts began to arrive from other countries, including funds from the Don Suisse and the Swiss Red Cross, from the American Friends' Service Committee and from Father Edward Flanagan, founder of Boys' Town, in Nebraska, U.S.A.

By the end of 1947, a full programme of education and technical instruction for the boys was in operation. Half the day was spent in studying and the rest in learning a trade—carpentry, pottery, masonry, shoemaking and metal work. For their work in the shops, boys were paid in special Villagio "currency". Some of this they used to pay for their daily needs or for extras in the store or restaurant and the rest was put aside as insurance against illness or injury.

By March of last year the Lanciano barracks were no longer large enough to accommodate the 135 boys who made up the community and offered Don Guido a piece of land on the nearby hills of Silvi, overlooking the Adriatic Sea.

The boys visited this land but finally decided to build their new community on the beach below the hills near the village of Silvi Marina. This beach was State property but a month after he had opened negotiations, Don Guido received it as a gift from Signor Giuseppe Saragat, Minister of the Merchant Navy.

Then it was the people and children of Geneva, Switzerland, who came to the help of the Villagio. They raised 115,000 Swiss francs ($29,000) towards the cost of building the new community and Signor Antonio Bandarin, an architect from Venice, undertook to plan the new Villagio and to train the boys in designing and construction.

In July 1948 the community moved from Lanciano to the coast, where the boys slept on the open beach or in pre-fabricated huts sent by the Don Suisse. Work was held up, however, when it was found that the Germans had mined the beach during their retreat in 1944, but once the mines had been lifted, the work went steadily ahead.

To-day, a hotel accommodating 150 boys is almost completed. Good progress is being made with the refectory, school chapel, hospital, workshops, streets and recreation grounds. The boys have also formed a co-operative construction company called the Costruziono Edilizie Piccolo Pino d'Oro (little Golden Pine Construction Company) which will undertake outside building and decorating work after the Silvi Marina community is completed.

Many Problems Remain

But there are still many problems to be solved, the main one being to find the $75,000 required to finish the Villagio. Meanwhile the boys still lack furniture and bedding. Many sleep on wire netting, with a single blanket. The village has no electricity and the nearest fresh water is over a kilometre away.

Yet, despite all these problems, Don Guido has maintained his education programme for the boys. When he arrived at Lanciano all the boys were illiterate. To-day nearly 100 have passed through elementary school and 15 are attending high schools. Two senior boys, Giuseppe de Loreto and Giuseppe Torosantucci, have won scholarships and are studying in Switzerland.

The Village of the Cross and the Pine, which is a fine example for Italy and the rest of the world, is now facing the biggest problem in its three and a half years' existence. It would be a tragedy if the efforts of its founder and citizens should be thrown away because of failure through lack of help.

CZECH Five-Year Plan for Culture

Czechoslovakia is putting into operation a big cultural development scheme as part of its Five-Year Plan for improving the living standard of the Czech people.

Recognizing that to obtain this higher standard of living requires not only an improvement in economic conditions but also an extension of existing cultural activities, the Law on the Five-Year Plan, enacted last year, laid down that "the material and cultural level of the people must be increased in such a way as to develop to the full their mental and physical abilities".

Details of the cultural side of the Five-Year Plan were given by "Prague News Letter", a Czechoslovak review, in its issue of May 19 last.

It reports that 5,386 million kopecs—over half of the total investments ear-marked for the cultural plan—will be spent on the development of educational facilities, including the erection of 3,700 new schools by 1953—an increase of 12 0/0 compared with 1948.

The construction of nursery, kindergarten, technical and medical schools has already begun in Bratislava and Kosice.

Basis changes have also been made more class rooms will be proare now divided into four grades and more class rooms will be provided to house the increasing number of pupils.

The plan also aims at the establishment of a new scientific library research institutes and the construction or maintenance of theatres, art galleries, museums and philharmonic rehearsal rooms.

The plan provides for the construction by 1953 of 18 Houses of Culture and two Halls of Culture in the Czech Lands, while in Slovakia, 72 Houses of Culture are to be built during the same periods. All the cultural education of the people will be concentrated in these institutions.

Mobiles libraries—some of which are already operating—will circulate literary works in all parts of the country, plans having been made for the purchase of 150 motor cars and 30 buses for this purpose.

New physical culture facilities will include 1,000 gymnasiums, 2,700 training grounds and playing fields, 40 swimming pools and 15 physical culture centres.

In order to give people a better chance of education and recreation after working hours the Five-Year Plan also provides for the installation of cultural equipment directly in the factories. This will include factory shools, libraries, cinemas and physical culture centres.

Education and Natural Resources

(Continued from page 4)

It has been found in practice that informal adult education through films, radio and the press and simply presented reading matter gives good results in the advanced type of community, while the teaching of natural history, gardening and forestry in schools (if there are any) or on selected outdoor sites is effective among the more primitive groups. In both cases demonstration, rather than precept, is the method that has the most powerful appeal. Field workers get the best results by establishing themselves in a definite area, small enough to be covered effectively, and staying there for at least a year — long enough, that is, for their teaching to bear visible fruits.

Children are easily and keenly interested in gardens, small cultivated areas and stock-raising establishments attached to their schools. In Poland and Holland remarkable results have followed the inclusion of natural history and simple agriculture in school and university programmes. Both of these countries now have periodical "forest festivals" accompanied by tree-planting on a big scale. Children and young people take part enthusiastically in these festivals, and their interest in them spreads to their elders in time. In a general way, youth groups have proved to be among the most effective agencies of popular education of this kind.

Whatever the angle of attack, one condition is essential for success: the programme must be cooperative, it must embrace the whole community and every one who takes part in it, whatever his or her age or social status, must understand clearly what is being done and why. For this, some knowledge of fundamentals is necessary; therefore, education is the key. Knowledge, in agriculture as in every form of activity, is the foundation of progress. Whithout the systematic propagation of knowledge in the first place, every attempt to improve the common lot must fail.

EUROPEAN UNITED NATIONS CENTRE AT GENEVA

Economic and Social Council Approves Unesco Report

DR. JAIME TORRES BODET, Director-General of Unesco, submitted the Report to the United Nations on the work of Unesco during 1948 to the United Nations Economic and Social Council, meeting in the Palais des Nations at Geneva, on July 18.

On this occasion Dr. Torres Bodet made an important statement on the activities of Unesco of which the main points are given below. He also paid a tribute to his predecessor, Dr. Julian Huxley, whose work as the first Director-General of Unesco laid the foundation of its success.

After a discussion in the course of which the delegates expressed their general appreciation of the work of Unesco during the year under review, a resolution approving the Report was passed by fourteen votes to none, with four abstentions.

Addressing the Council at the opening of the day's proceedings Dr. Torres-Bodet said:

UNESCO in my view is in the process of emerging from its first phase, which I would describe as exploratory or experimental. During that phase the prime objective, as was natural and indeed necessary, was to survey the field and try out methods.

As, moreover, Unesco's field of activity was that of the workings and fruits of the human mind, it is understandable that diversity should also have been the dominating feature of Unesco's first endeavours. It is only thanks to the experience gained in those early explorations that Unesco has today a clearer view of its aims and the means to attain them.

This better understanding of our ends and means, coupled with a growing stability in our internal administrative structure, appear to me to open the door to a second phase which shall be vigorously constructive. If Unesco is to succeed in the path of practical achievement it must now carefully eschew a dispersion of effort. Our resources in terms both of money and manpower are slight, compared with our responsibilities, and concentration must become our law.

Eighteen Directives

In February last our Executive Board adopted a scale of priorities under which the various projects in our programme have been assigned budgetary means corresponding to varying rates of performance. These steps will pave the way for a concentration of our programme which will, I hope, become effective in 1950. The General Conference at Beirut itself expressed a desire for some order of precedence in the programme. It requested the Director-General and the Executive Board to prepare a code of directives which will later appear at the head of our list of projects, and the purpose of which is to extract the essential purpose of those projects.

A first set of eighteen directives has been drawn up. Lying halfway between the necessarily broad objectives laid down in our Constitution and the very precise purposes of individual projects, these directives lay down a general approach which bears witness to Unesco's desire for greater cohesion. Parallel progress can be noted in our methods of work. I cannot here review those methods, but would like to indicate the main lines along which our activities are developing.

Cooperation

First, co-operation between the Secretariat and our Member States. This is twofold: co-operation with Governments, and with National Commissions. With regard to Governments, the action of the Secretariat has hitherto been largely of an informative character. We have called upon Governments to help us gather the data we needed and to organize the international exchange of information which is one of our most useful permanent functions. I would refer in this context to our work in the field of exchange of persons, and particularly to the handbook which lists over 16,000 fellowships and other opportunities for study abroad, offered in 37 different countries. Such information is sometimes collected by means of enquiries, not necessarily confined to official sources, such as that on technical needs of press, radio and film, covering to date 43 countries.

The Secretariat's activity, however, is also—and is increasingly becoming—stimulative and creative. Sometimes we use a method which I might describe as persuasion by example, such as the revision of school textbooks, and our work on teaching for better international understanding. Sometimes we aim at the establishment of contractual rules consonant with our aims. A first convention, to facilitate the international circulation of visual and auditory material of an educational, scientific and cultural character, was adopted at the last session of our General Conference and is now open to ratification.

Others are in preparation. A draft agreement on the importation of books, newspapers and periodicals has been circulated to Member States for first consideration, and has also been submitted for comment to the Conference of Contracting Parties to the General Agreement on Tariffs and Trade. We are actively engaged in consultations with a view to drawing up a draft universal convention on Copyright. We have also undertaken a systematic analysis of all existing cultural conventions, or clauses dealing with cultural matters in other types of international agreements, with a view to the preparation of model clauses concerning cultural exchanges.

Finally, co-operation with governments has in some cases taken the form of co-operative assistance. Such assistance may be of a material or a technical nature. It has been material, for example, in our programme of reconstruction of war-devastated countries, whom Unesco has sought to aid in two ways: first by direct emergency supplies, paid for out of the Organization's unfortunately modest resources; secondly, by stimulating private gifts. As to technical assistance, we have provided it this year in the education field in the form of consultative missions, sent at the request of governments and paid for in part by those governments, to study for their benefit problems formulated by themselves. Two such missions have been at work in recent months, in the Philippines and in Thailand; and one is about to leave for Afghanistan.

National Commissions

As regards the National Commissions, you are aware that the very idea of them was originated by our Organization. They are intended to serve a twofold purpose. Consisting of exceptionally qualified or representative individuals, they are designed as consultative bodies for advising the governments on questions which concern Unesco. But they can also serve as valuable liaison between the Secretariat and the intellectual leaders in the different countries whose co-operation is indispensable to Unesco.

The second direction in which our efforts are proceeding concerns collaboration with non-governmental international organizations. These bodies offer us the aid of communities already established and organized for purposes of international co-operation. In their respective fields they give practical expression to that understanding and agreement beyond the closed walls of political units to which Unesco is dedicated. Eighty-two of these organizations have been granted consultative status and eighteen further applications are now being examined. To my mind this represents a source of great strength for us, and one on which we should draw for joint constructive effort.

That is what we try to do whenever the need for restoring international relations between intellectual and professional circles has caused Unesco to initiate action and assume specific responsibilities. The relations with the International Council of Scientific Unions in the domain of natural science are a typical instance of this kind of work, which in the last few months has extended to fresh fields. In January the International Council of Philosophy and Humanistic studies was set up, under Unesco's auspices. Unesco has joined hands with the World Health Organization to establish a Council for the Co-ordination of International Congresses of the Medical Sciences. Finally, the International Theatre Institute, created last year, is growing steadily.

Thus, following the upheavals of the war, the international community of research workers and creators, who form the vanguard of progress, is in course of re-establishment. Numerous conferences and other meetings, an ever closer network of contacts, by ensuring the exchange of knowledge and comparison between ideas, maintain and develop this association of minds.

The third type of collaboration in which Unesco participates is collaboration with the United Nations and with the other Specialized Agencies. I need not enumerate the almost daily occasions on which, in 1949 as in 1948, we have been associated with their work. I will only refer to the most recent instance, namely, the plan for technical aid to under-developed countries.

A Call To Action

In order that those unfavoured by history and geography may catch up with the more fortunate, it is not enough to furnish them with the means of progress. They must be made capable and desirous of using them and, for that purpose, it must be "their" progress which is involved, and they must know it. It is therefore essential that technical assistance be closely linked with a corresponding effort to guide peoples towards an active and intelligent participation in the shaping of their own destiny as they themselves see it.

The work of peace to which the United Nations as a whole is dedicated requires that the synthesis of forces and special skills, and especially the alliance between the intellectual and the technical, the economic and the social shall be built up again in the light of real problems viewed in all their complexity. That synthesis can only take place and is even only conceivable in terms of the concrete. The problem of co-ordination must be posed and solved in and through action.

Dr. Torres Bodet and Prof. Laugier, United Nations Secretary-General of the E.C.O.S.O.C.

"It would be dangerous to believe that concentration of effort necessarily means reduction of expenditure. Any programme, no matter how modest, that aims at obtaining tangible results, is more costly than a policy that does not succeed in going beyond the administration stage . . .

"If Unesco were simply to give a list of promises without possessing the means of fulfilling them, it would be in danger of deceiving the people. By its very vocation, the Organization must serve the truth . . .

"The tendency to universality should not prejudice respect for the genius of each nation. The aim in view should be not standardization but an attempt to 'enrich ourselves by our differences'. All cultures should be of mutual help without seeking to dominate one over the other . . ."

—Dr. TORRES BODET at Geneva, July 18, 1949.

Goethe and Germany

by Benedetto CROCE

IT has been shrewdly observed that great poets, far from being the interpreters and representatives of their own peoples, are their critics, correctors and integrators. Remember Dante and the Florentines, as he saw them ; Cervantes and his Spanish contemporaries, crazy about knight-errantry; Shakespeare and the English—proverbially correct and cold, which his dramas certainly are not; and Goethe, serene, well-balanced and thoroughly human, in contrast to his Germans—a warlike and fanatical race, serious and hard-working, admittedly, but with a considerable share of pedantry.

GŒTHE was not to the taste of the politically-minded among his people, who more than once showed that to his supreme genius they preferred a poet of the second rank, such as Schiller. And when the German national tradition was intensified to the point of delirium, and the first centenary of Gœthe's death arrived, in 1932, the demonstrations were prepared with a lack of enthusiasm which clearly revealed the gulf, the estrangement that separated him from what had then become Hitler's Germany.

Now that misfortune has smitten his great nation—great in its many virtues, its talents and its energy—and at the same time has smitten Europe, thus deprived of a force essential to its balance and situated in its geographical centre, what better can Germany do, at this bicentenary of the birth of her mighty poet, than to raise herself towards him in spirit, accept his message and reflect on it anew, with such devotion and sincerity that it shall restore light to the minds and human feeling to the hearts of his countrymen?

I did not accept the invitation to participate in the honours shown to Gœthe in Germany in 1932, for they seemed to me to be insincere. But I turned again to his books and re-read them, and continued to write critical studies about them, as I had done during the first World War, when Germany was fighting against Italy, as I did again during the second war when Italy, having become Fascist, was allied to a Germany that had become Nazi; and as I continued to do at the end of the war, amid the political tasks that I had accepted. And always there came to me from Gœthe comfort and serenity and courage, because he always carried me beyond and above the things of the day—which is the only way of achieving real union with them, of loving and serving them.

But it was no longer possible for me to speak openly and directly with the Germans—I mean with those Germans who, like myself, were concerned with philosophy and history and poetry—as I had been used to do in the pre-1914 days, exchanging ideas and suggestions and forming precious and unforgettable friendships with them. And when, in 1936, a Swiss paper asked me to express my opinion about the Germany of that day—which had recently caused a great scandal by having, among other things, altered the names of its cultural publications (for instance, transforming the Review of Cultural Philosophy into the Review of German Cultural Philosophy), and had removed from the pediment of Heidelberg University the inscription, To the Living Spirit, replacing it by: To the German Spirit—I sent that Swiss paper an article inspired by the feeling of Gœthe, who always detested the idea and the expression Deutschtum, and to which I gave the title of "The Germany we used to love". This article could not be published in Germany, or even discussed by my friends there.

The period in which Germany should take most pride is that in which she possessed such a poet as Wolfgang Gœthe, who belongs to the small company that is headed by Homer, together with thinkers who to this very day are still masterly and up-to-date-Kant and Hegel and a few others, such as Jacobi, that very noble genius, who deserve to share their high place, and historians and philologists who put fresh life into the study of language and history; not to mention scientists, physicists and mathematicians. Certainly—you will say—the Germans take great pride in that period when their country was centred on Weimar, even if they are unable to cease loving the other extreme of Potsdam, to which their souls are secretly attracted. Yes, they do take pride in it. But even when they do so with complete sincerity, they do not—if I may be permitted to say so—properly understand its origin and purpose. They regard it as belonging entirely to Germany, or as a specifically German reaction to and rebellion against the culture of Europe as a whole.

What was peculiar to Germany in the age of Weimar was a galaxy of outstanding minds, such as can only be entirely equalled, perhaps, in the Greece of Pericles' day. Germany was thus able to exert in the world of ideas a hegemony which was conferred upon her, not by her Deutschtum, her Germanism, but by her Europeatum, or rather by that world-spirit which, at other periods of modern history, had conferred the same hegemony upon Renaissance Italy or upon the France of Descartes and Louis XIV, and without which it would have been valueless or inexistent.

The Germany of those days was the legitimate daughter of Europe, taking over the management of the ancient house—not a daughter shut out like a foundling, and filled with rancour, desire for revenge, and the spirit of destruction and self-assertion. And now this well-deserved and much-desired hegemony returns to her, in conformity with the new feelings and needs of the human race, for the good of us all; and all of us will greet her with emotion and admiration; and our gratitude will perhaps be so great as to make us forget how much of our own strength we have had to give out, in order to revive her and support her so that she should completely fulfil her mission and not, in her turn, yield up the hegemony to another nation which has meanwhile been preparing for the call, as is required by the vicissitudes of things human.

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« PASSANS, CETTE TERRE EST LIBRE. »

Aquarelle de GOETHE

Paysage : *Au bord d'une route, au premier plan, un mât, sur lequel est fixé un écriteau portant l'inscription : « Passans, cette terre est libre ». Au sommet du mât, le bonnet rouge*

Goethe exécuta pendant la Campagne de France, durant la retraite, l'esquisse qui servit pour cette aquarelle et il l'envoya à Herder le 16 octobre 1792. Au mois de novembre de la même année, après avoir fait un assez long séjour à Pempelfort chez son ami le philosophe Jacobi, il lui laissa en souvenir l'aquarelle qui fut, après sa mort, retrouvée dans sa succession.

Paradise on Earth is Known

Through the mossy sods and stones,
Stream and streamlet hurry down—
A rushing throng! A sound of song
Beneath the vault of Heaven is blown!
Sweet notes of love, the speaking tones
Of this bright day, sent down to say
That Paradise on Earth is known,
Resound around, beneath, above.
All we hope and all we love
Finds a voice in this blithe strain
Which wakens hill and wood and rill,
And vibrates far o'er field and vale,
And which Echo, like the tale
Of old times, repeats again.

(From Goethe's Faust, interpreted by Percy Bysshe Shelley.)

The Complete Man

by Jules ROMAINS

THE complete man will not be he who learns out of books everything that the specialists know (besides, this is a childish and ridiculous ambition—increasingly so). It will be he who, within himself, succeeds in reviving the various powers and aptitudes of man; he who, by inward exercise, gains control of man's various ways of listening, questioning, feeling nature, and responding to her.

The complete man—or his not all-unworthy approximation—must be able himself to assume the attitude that forms the starting-point of a poem, a tragedy, a work of historical research, a scientific discovery, a philosophical meditation . . . in short, not all the individual attitudes, but each of the main attitudes of the human mind.

That is not all. He must also, if he can, learn by experience how a State is governed. Neither will he be satisfied with looking on at the daily round of life. He must enter fully into life itself, experience the passions, arouse them in others, discover how they may be made to benefit the spirit or how they can be controlled.

For the art of living—one of the greatest and most exacting of all arts—must include an understanding of all the conditions to which life is subject, an estimation of the opposing forces, the skill to manœuvre among them, utilizing or evading them turn by turn, as the sailor does.

Count up the men who, since the dawn of civilization, have been bold enough to conceive of their work as Goethe saw his, were highly conscious of their resources, and even at periods when the undertaking was less wildly excessive. And not merely to conceive it, in a fit of boyish lyricism, but to remain faithful to it throughout a very long lifetime, to carry it out with the patience of a labouring god. I can think of only one precedent—that of Leonardo da Vinci. By comparison—let us have the courage to admit it—Aristotle, Dante, Shakespeare were specialists. Of course the comparison would lose some of its value were it not that in a few at least of their supreme achievements, Leonardo and Goethe rose to heights that no one has surpassed. I am not suggesting that the men of specialized genius be less honoured because of this. But we may admit, all the same, that if Leonardo and Goethe had never existed, our conception of man would be lesser than it is.

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UNESCO'S HOMAGE TO GOETHE

These are the titles of the essays contained in the Unesco memorial volume to Goethe, with the names of their authors:

GOETHE	*Ernst Beutler.*
GOETHE AND THE CONCEPT OF JUSTICE	*K.J. Burckhardt.*
GOETHE AND GERMANY.....	*Benedetto Croce.*
THE PRESIDENT OF EUROPE	*Jaroslaw Iwaszkiewicz.*
GOETHE'S "WERTHER"	*Thomas Mann.*
MESSAGE FROM THE EARTH.	*Gabriela Mistral.*
GOETHE AND THE CREATIVE FACTORS IN CONTEMPORARY CULTURE ...	*F.S.C. Northrop.*
GOETHE	*Sir Sarvepalli Radhakrishnan.*
NOTES ON GOETHE.....	*Alfonso Reyes.*
GOETHE'S SECRET.....	*Jules Romains.*
GOETHE'S MESSAGE TO THE "NEW" NEGROES....	*Léopold Sedar Senghor.*
THE LAST PRINCE OF POETS	*Stephen Spender.*
GOETHE AND THE EAST....	*Taha Hussein Bey.*

IN COLOUR :

A visitor to the Unesco Travelling Exhibition looks at a picture by Cézanne.

COLOUR REPRODUCTION : Unesco's First Travelling Exhibition

The first of Unesco's travelling exhibitions of Colour Reproductions was inaugurated at Unesco House in June. Eleven similar collections have been prepared and will be exhibited by Member States.

COLOUR reproductions of works of art have become very important. They may be used as illustrations for art books, or as inset plates, and thus contribute, in the same way as black and white photographs, to the building-up for modern man of that "imaginary museum" to which André Malraux alludes — a museum that is bound to enrich and enliven our knowledge of Art through the ages by enabling us to establish points of similarity and make comparisons.

Whatever their technical perfection — towards which new strides are being made every day — colour reproductions can never, of course, take the place of the original work. They can never be more than closer and closer likenesses. But they are a very valuable medium for the information and instruction of students, teachers and the general public. They make known in the remotest corners of the earth the most varied, even the most contradictory, forms of art, thus spreading the influence of art, in all its rich diversity, throughout the world. In so doing, they contribute to a reciprocal knowledge and understanding, in all countries, of the different forms of art and hence of the different civilizations from which those forms have sprung.

That is why Unesco is organizing a series of travelling exhibitions of colour reproductions. The first of these exhibitions was inaugurated at Unesco House in June. It comprises about fifty reproductions, chosen with a view to giving as accurate an idea as possible of the period from 1860 (the Impressionists) to the present day — a very rich and important period from the pictorial point of view. The main pictorial tendencies and the principal painters of that period are represented. The reproductions were chosen by a committee of art experts from among the best available, having regard both to the technical quality of the reproduction and to the artistic value of the original from which it was copied. This exhibition will be sent mainly to countries that have no important collections of original works of that period.

Eleven similar collections of the same reproductions have been prepared, and offered by Unesco to certain Member States, which will exhibit them. A catalogue will be sent with the pictures, containing an introduction by Mr. René Huyghe, Head Curator of the Painting and Drawing Department of the Louvre, and a historical summary of the period and biographical notes on the artists whose works are reproduced. Future exhibitions of colour reproductions to be organized by Unesco will be concerned with important earlier periods in the history of art.

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Edvard MUNCH

IT is difficult to give an appreciation in a few lines or even pages of the complex output of a life of research and experiment. While taking its appointed place in history, a living work also contains within itself the seeds of new meanings. We may ask whether it is the work itself that reveals new facets in terms of new modes of cultural expression, ever creating for itself a vast public, or whether it is ourselves who read into the work, now a part of history, new meanings by continual re-interpretation in our minds and our imaginations.

The Munch exhibition at Unesco House raises this question yet again.

The revelation of modern French Art came to Munch as early as 1889 when Impressionism had already formulated its major dogmas, set its ripples circling outwards, and was beginning to crystallize into a new convention.

Hence Munch's quest for poetry was to follow other lines. Moreover his close spiritual links with the dramatic and literary vision of the northern world led him instinctively to give each symbol a significance transcending that of the form alone. The symbol becomes expressive in itself. Accordingly it is the drawing which is the dominant factor in the whole of his extensive and careful work, and which leads him to welcome every occasion of giving it play; faces, things, street and domestic scenes, and even the experiments of other artists... Echoes of the new possibilities of expression evolved by such artists as Forain, Toulouse Lautrec, or Van Gogh are easily recognizable in Munch's drawings; but Munch himself so dominates the whole that each such echo becomes, more than a face, a thing or a scene from a life of the century's end, a visual poem whose innermost and most secret trend the artist has tried to grasp.

The challenge of that other great northerner, Van Gogh, is echoed and converted into a more clear-cut, almost social affirmation which is at the root of an occasionally morbid and bookish aspect of expressionism.

It was in Germany principally, at the beginning of the present century, that that affirmation was taken up and clarified, foreshadowing already the sorrows and ruins which were to be. Schmitt-Rottluff, F. Marc, Kokoschka, Hofer, etc... in the first twenty years of the century received indeed from Munch a message which, in the expressive violence of a symbol, formulated one of the most agonizing aspects of the modern world and its problems.

Scream! *by Edvard Munch.*

★

ART CRITICS MEET AT UNESCO HOUSE

The Second International Congress of Art Critics was held at Unesco House, Paris, from June 27 to July 1. Dr. Jaime Torres Bodet, Director-General of Unesco, opened the congress with an address in which he outlined the possibilities of co-operation between Unesco and art critics.

Child with Dove, *by Pablo Picasso.*

More than 200 art critics belonging to about 35 countries were present. The importance of the Congress was marked by the presence of 13 delegations representing the Art Critics' Associations of the following countries: Belgium, Brazil, Czechoslovakia, Denmark. France, Greece, the Irish Free State, Italy, Mexico, Poland, Switzerland, the United Kingdom and the United States.

The main business of the Congress was to set up the International Association of Art Critics, whose executive committee was formed as follows:

PRESIDENT: M. Paul Fierens (Belgium).

VICE-PRESIDENTS : Sr. Lionello Venturi (Italy); Mr. James Johnson Sweeny (U. S. A.) ; M. Raymond Cogniat (France); Mr. Eric Newton (Great Britain); Sr. Crespo de la Serna (Mexico); M. G. Knuttel (Holland).

GENERAL SECRETARY : Mme. Gille Delafon (France).

DEPUTY GENERAL SECRETARIES : Sr. Milliet (Brazil) ; M. Foundoukidis (Greece).

One of the principal themes of the Congress was "Art and Society". A number of papers on this subject were read, and interesting discussions followed.

At its last meeting the Congress adopted resolutions dealing with liberty of criticism, the defence of modern art, cooperation with Unesco to defend authors' rights, the teaching of art and the formation of an International Federation of Art Critics and Historians. The hope was expressed that artists themselves would soon form an International Federation, and that all forms of political discussion would be excluded from the proceedings of the Art Critics' Association and annual Congress.